MEDICAL AND SURGICAL REPORTER.

No. 2118. SATURDAY, OCTOBER 9, 1897. VOL. LXXVII—No. 15.

ORIGINAL ARTICLES.

THE STUDY OF MEDICINE.*

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The occasion that brings us together to-day is of interest to all who regard education as a matter of vital importance. New conceptions of the end of education, new methods for the attainment of that end, and efforts to train the teacher as well as the taught occupy the attention of the thinking world more than ever before. Just what share in this onward movement women may wisely claim is to many thoughtful minds a question full of perplexing problems. However, in the most enlightened countries of Christendom public opinion now accedes to the conclusions one of England's greatest and most fair-minded statesmen reached as early as the 15th century. Writing to his daughter's tutor concerning the cultivation of her remarkable natural gifts, Sir Thomas Moore says: "The high quality of Margaret's wit is not to be depressed. I think that they most truly depress and affront the wit who accustom themselves to practice it on vain and loose objects rather than raise their minds by the study and approval of what is good in itself.

"It mattereth not in harvest time whether the corn were sown by a man or a woman, and I see not why learning in like manner may not equally agree with both sexes, for by it reason is cultivated, and, as a field, sown with wholesome precepts which bring forth good fruit. Even if the soil of a woman's brain be of its own nature bad and apter to bear fern than corn (by which saying men oft terrify women from learning), I am of opinion that a woman's mind is, for that very reason, all the more in need of manure and husbandry that the defect of nature may be redeemed."

Two main objects are to be attained by the process of education: culture, which is the moulding or developing of the soul or mind, the formation of character; and utility, or the training of the powers of mind and body to the performance of work of which the world has need, and which it is willing to pay to have well done. The first great apostle of these doctrines was Locke; and, following closely after him, elaborating his ideas and converting them into a living force, came Rousseau, Pestalozzi, Froebel, and later Herbert, who supplied the philosophical basis for these theories and founded on them the study of psychology. The developmental training of the child is provided for by these teachers, long before the child is conscious that it is being trained. In the little child there is great susceptibility to environment.

* Address to the Corporators, Faculty and Students of the Woman's Medical College of Penna., September 29, 1897.

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Environment means stimulus, and environment must in large part determine what the future of the child shall be. To quote from Miss Laura Fisher, the Superintendent of Boston's Kindergartens: "In Froebel's great book, 'The Mother Play,' he presents in the form of childish play, ideals appealing to the sympathies and imagination of the young child, believing that the presentation of ideals in that way will affect behavior and influence character. It is through the habits it cultivates and exercises and the ideals that it awakens that the Kindergarten shapes the child's character. Children are thus trained to be busy, helpful, orderly, punctual, cleanly, kind, attentive, and self-controlled members of a small community in which each member's rights are recognized by all, and in which each co-operates with all." Thus the foundations of sterling character are established in early life, and a logical sequence being followed in the further development of the powers of mind and body, a harmonious result is to be expected. When such methods for training the young become universal, we may look for the dawn of which the poet sings, with its "crowning race of human kind" which shall bring "the statelier Eden" back to men.

The methods followed in establishing the foundations of a preliminary education are applicable also to the higher schools and even to professional training. Hence, we see the tendency in recent years, to combine practice with theory in such a way as to exercise the faculties we desire to develop. In medical schools, lectures have ceased to constitute the main avenue for the acquirement of knowledge. Laboratories, practice in the dissecting room, bedside instruction in hospitals, and clinical teaching serve more directly to familiarize the student with the nature and management of disease. Thus, far more satisfactory work can be done in educating the student to the quickness of observation, thoroughness in investigation and promptness in action so essential to success in medicine.

Some one has well said, "In religion, in politics, in art, in all that makes life beautiful and men true, we must know the past if we would use the present or provide for the future;" and we cannot to-day, perhaps, more profitably employ the time allotted to us, than by looking back for a while into the chaos from which the science and art of medicine have sprung.

In the Imperial gallery of Florence is a statue which ranks with the Laocöon and the Apollo among the master-pieces of art. It is the principal figure of a group supposed to have been originally arranged in the pediment of a temple. The figure is that of the grief-stricken mother, Niobe, clasping her terrified child, the last of the twelve sons and daughters whom the ruthless destroyer Death, had felled lifeless before her. As the ancient legend runs: "When the gods turned a deaf ear to her agonizing cry 'Oh! spare me but one of so many!' and even the last little daughter was taken, desolate she sat amongst her dead, seemingly torpid with grief. The breeze moved not her hair, no color was on her cheek, her eyes glared fixed and immovable. There was no sign of life about her. Her very tongue clave to the roof of her mouth and her veins ceased to conevy the tide of life. Her neck bent not, her arms made no gesture, her foot no step. She was changed to stone within and without. Yet tears continued to flow, and borne by a whirlwind to her native mountain, she still remains there a mass of rock, from which a trickling stream flows—the tribute of her never-ending grief."

Well do both legend and statue illustrate the great human need for help in suffering to which the art of healing owes its birth! The earliest glimpses of medical knowledge are found in what may be termed a patriarchal period or a period of traditional medicine, when observations which were the result of accident, instinct, or experience were handed down to succeeding generations orally by the patriarch—the chief of the family who united in himself all power and was the depository of all traditions.

Later followed the sacerdotal period, when because of the chaotic state of human knowledge, superstition prevailed and the practice of medicine came to be chiefly confined to the priests, and religious rites, amulets, and charms, votive offerings, penances and pilgrimages were combined with medicinal agencies in the cure of disease. The religious instincts of

man had not yet taught him that the pursuit of science was not the discovery of the purposes of God's will toward himself and his final destiny, but rather a discovery of the methods by which Almighty power worked in nature. A wise man has aptly said, "The question *'how?'* not 'why?' is the burden of the inquiries of science! Religion properly seeks to know 'why?' in the questioning of God's providences, but must wait for the full fruition of its knowledge until such can be spiritually discerned!"

The early association of priest-craft with medicine seems to have done much to arrest the development of the science. Hospitals were not known to the ancients, but it was common for the sick to be exposed in public so that any of those who passed by who had been similarly attacked and who had been cured, might give their advice for the benefit of the sufferers. Upon recovery from illness patients were expected to go to the temple and to make inscriptions of the symptoms of their diseases and the curative agents which had been beneficial to them. These registers were kept with as great care as were the archives of the nation. For a long time every one had the privilege of going to consult them and choosing for his sickness or that of his neighbors, the medicaments of which experience had confirmed the value. The priests, who were charged with the study of these observations, later seized upon the exclusive practice of the art, and when they had collected a great mass of facts, they formed a medical code —the fruit of the experience of ages.

It is claimed that medical knowledge with the Chinese may be traced to a period as remote as 2687 B. C., when one of the Chinese emperors compiled a medical work which still serves as a basis for practice in the empire of Cathay.

The medical code of the Egyptians was comprised in a work known as the "Sacred Book," which originated about the 17th century B. C. If the priests in following the rules there laid down could not save a patient, they were not held responsible, but if they departed from them and the patient died, they were punished. Thus clogs to genius were not lacking in olden times. The medical spirit of the day was highly conservative.

The medical writings of the natives of India are contained in their sacred books —the Vedas—which were preserved by oral tradition from a period about as remote as 1500 B. C. until 1500 A. D., when they were transcribed in Sanscrit—a language that the Brahmins — the priestly caste—alone were permitted to study.

Jewish medicine is purely theurgic in character and may be traced to the time of Moses. The Jews have been called the creators of public hygiene because of the principles of health so beautifully expounded by the Mosaic code. This, with the medical contents of the Talmud, constituted their ancient system of medicine.

No researches were permitted amongst these ancient peoples upon the dead bodies of either men or animals, and no priest dare attempt a bloody operation, however simple, for fear of taking life and thus violating his sacred vows. Among the Egyptians alone does anything seem to have been accomplished in the development of surgery. The physicians of the warlike Pharaohs, it is said, practised venesection, cupped, performed lithotomy and amputations, did ophthalmic operations, set fractures, and even practised dentistry, as has been shown by an examination of the mummies. The anatomic knowledge essential to this result is supposed to have been obtained through the practice of embalming, which goes back to an immemorial period. Truly sublime must have been the courage of these early surgeons who dared to perform operations at the risk of danger to themselves!

The earliest medical writings of the Greeks appear about the fifth century B. C. The dim lights of tradition stamp with a fabulous character all that we can learn of the art of healing with this cultured nation. The Centaur, Chiron, according to these records held a school in a grotto in Thessaly and taught philosophy, music, astronomy, military tactics, political science and medicine—occupying (as Dr. Oliver Wendell Holmes would say) not simply a "chair" but a whole "settee" in an educational institution.

Among his pupils was the noted Æsculapius, the son of Apollo, who was destined to become eminent as a physician. The poet, Pindar, tells us that Æscula-

pius cured ulcers, wounds, fevers, and pains of all who applied to him, by enchantments, calming potions, incisions, and external applications.

Fifty years after the destruction of the kingdom of Priam, there was elevated at Titanus, a city of Peloponnesus, the first temple in honor of Æsculapius. The priests attached to his worship were named Æsculepidæ, or descendants of Æsculapius.

The temples of the god of medicine were very salubriously situated. People came from all quarters on pilgrimages to these places. The sick and convalescent found here both agreeable and healthful diversion, combined with pure air, a healthful regimen, faith and hope, for the Æsculepidæ employed every means to control the imagination of their patients. Those who recovered went to their homes, blessing the divine author of their recovery and leaving behind them substantial testimonials of their gratitude. Those who received no benefit believed that their offerings were rejected because they were insufficient, and redoubled their zeal and liberality.

To such forceful minds as those of Hippocrates, Pythagoras, Aristotle and Galen is due the progress made by Greek medicine, and from this there sprang subsequently the various European schools—the Italian, French, German, English and Spanish.

Through the period of decadence which marked the Middle Ages, and during which all the sciences suffered, that of medicine met with the common fate. As a reaction from the absurdities to which the practice of the art of healing by the priests had led, an unlicensed lay period developed, in which the most egregious charlatanism was practised by self-constituted physicians and surgeons, who imposed upon the credulity of the public for purposes of gain, and who seldom suffered their deserts because of their practice of moving about from place to place in pursuit of their calling. It was during this time that barbers, bone-setters, bathers, and travelling mountebanks who had no knowledge of therapeutics or anatomy wandered about seeking whom they might devour.

An admirable picture of the status of medical science during the Middle Ages is given us by Le Sage, who wrote in the seventeenth century his "Adventures of Gil Blas"—a satire directed against Botallus. In this work a certain Dr. Sangrado says to Gil Blas (his apprentice of three weeks), "Hark you, my child, without more ado, I will initiate you in the healing art, of which I have for so many years been at the head. Other physicians make the science consist of various unintelligible branches; but I will shorten the road for you, and dispense with the drudgery of studying mental philosophy, pharmacy, botany, and anatomy. Remember my friend that *bleeding* and *drinking warm water* are the two grand principles; the true secret of curing all the distempers incident to humanity. Yes, this marvellous secret which I reveal to you, and which Nature, beyond the reach of my colleagues, has failed in rescuing from my pen, is comprehended in these two articles, *bleeding* and *drenching*. Here you have the sum total of my philosophy; you are thoroughly bottomed in medicine and may raise yourself to the summit of fame on the shoulders of my long experience. You may enter into partnership at once, by keeping the books in the morning and going out to visit patients in the afternoon." The most amusing accounts of this young doctor's practice follow.

In Charles Reade's novel, "The Cloister and the Hearth," an historical tale of the fifteenth century, occurs the following scene: Gerard, the hero of the story, lies in an inn in Dusseldorf, suffering with a wound which he received during an encounter with a bear. His friend, a rough soldier, has gone off to ransack the shops for some lemons to assuage his feverish thirst. As Gerard tosses from side to side on his bed, the door opens and an imposing figure enters—a physician in full dress—who had been apprised of the presence in the inn of a patient by the inn-keeper, who expected to share the fee for the medical adviser's services. The old gentleman was dressed in "a long sober gown trimmed with rich fur, cherry-colored hose and pointed shoes, with a sword by his side in a morocco scabbard, a ruff around his neck, not only starched severely but treacherously stiffened in furrows by rebatoes, or a little hidden framework of wood; and, on his head, a four

cornered cap with a fur border; on his chin and bosom a majestic white beard. Moreover, a boy followed at his heels with a basket where phials, lint, and surgical tools rather courted than shunned observation." After examining his patient the old gentleman says oracularly—"I ordain phlebotomy and on the instant." The man of art then explains to Gerard (who demurs somewhat at the doctor's decision, having lost much blood already) that "in disease the blood becomes hot and distempered, and more or less poisonous; but, a portion of this unhealthy liquid removed, Nature is fain to create a purer fluid to fill its place. Bleeding being therefore both a cooler and purifier, is a specific in all diseases, for all diseases are febrile whatever empirics might say. But think not," said he, warmly, "that it suffices to bleed; any paltry barber can open a vein (though all cannot close it again). The art is to know what vein to empty for what disease. T'other day they brought me one tormented with earache, I let him bleed in the right thigh, and away flew his earache. (By the by, he has died since then). Another came with toothache, I bled him behind the ear, and relieved him in a jiffy. (He is also since dead as it happens). I bled our bailiff between the thumb and forefinger for rheumatism. Presently he comes to me with a headache and drumming in the ears and holds out his hand over the basin—but I smiled at his folly and bled him in the left ankle sore against his will, and made his head as light as a nut."

Since such were the methods of the medical practitioners of the day, it is easy to understand that for ordinary maladies the generality of the public preferred the employment of domestic remedies, "herbs" or "simples" as they were commonly called. In the charming work, "The Household of Sir Thomas Moore," we have given us, in the form of a conversation between Sir Thomas and his friend Erasmus, a glimpse of the fantastic household medication so much affected in that day. "For Man's Medicine," says Sir Thomas to his friend, as they walk in the old-fashioned garden of his Chelsea home, "there is Herb-two-pence that will cure a hundred ills. Camomile to lull a raging tooth; the juice of Buttercup to clear his Head by Sneezing; Vervain cureth Ague; and Crowfoot affords the leaste painfulle of Blisters; St. Anthony's Turnip is an Emetic; Goosegrass sweetens the Blood; Woodruffe is good for the Liver; and Bindweed hath nigh as much Virtue as the foreign Scammony. Pimpernel promoteth Laughter; and Poppy, sleep; Thyme giveth pleasant dreams; and an Ashen Branch drives Evil Spirits from the Pillow. As for Rosemarie, I lett it run well over my Garden Walls, not onlie because my Bees love it, but because it is the Herb sacred to Remembrance, and, therefore, to Friendship, whence a Sprig of it hath a dumb Language that maketh it the chosen emblem at our Funeral wakes and in our Burial Grounds."

There was plenty of poetical sentiment but little science, it may be seen, in this Materia Medica.

With the revival of learning, we come to the third era in the development of medicine—when men of earnest purpose and mental strength, after much application, perseverance, and diligence succeeded in bringing about a decided reform by the improvements which they instituted in medical teaching. Such men as Paracelsus, Vesalius, Ambrose Paré, Bichat, Laennec, Hunter, Harvey, Jenner, and others, by a systematic observation of natural facts, the careful study of anatomy, and the application of discoveries made in other sciences to the development of medicine, succeeded in establishing far more practical methods in medical teaching than had heretofore been employed. The great reverence of the people for the bodies of their deceased relatives and friends continued to be an insuperable obstacle to the progress of anatomical knowledge.

As cadavers were so difficult to obtain, swine and dogs were used by the professors in their demonstrations. All the great anatomic discoveries of the sixteenth and seventeenth centuries were made on animals. Vesalius, it is known, robbed with his own hand the churchyard, or had his pupils do it, in order to obtain material for his lectures. A professor of anatomy in Paris, in 1536, had not during his whole life dissected a human body, but had used dogs and swine. Those who attempted to make anatomic demonstrations of the human body arous-

ed the frenzy of the people and were persecuted even to the point of death, often being obliged to save their lives by flight. As late even as the eighteenth century, professors in the German medical schools had at their disposal only three or four cadavers in a year. The prejudice against dissection was not less strong in England than in Germany, while in Edinburgh, Scotland, scarcely a single cadaver a year was available. It is said that the surgeon, Monroe, gave at one time 124 lectures over a single cadaver.

Opportunities in other departments of medical science were also greatly limited. In the early part of the eighteenth century the schools at Halle and Göttingen boasted only two professors, one for external and one for internal medicine. In fact, the limitation of opportunities for a thorough medical training comes very close down to our own time.

In the address on Surgery, delivered at the semi-centennial meeting of the American Medical Association, Dr. W. W. Keen says: "Even so late as 1860, when I began the study of medicine, there were no laboratories except that of anatomy (the dissecting-room). I doubt whether of the two hundred and odd men who graduated with me in 1862, 10 per cent. had ever looked through a microscope or handled a test tube, palpated a tumor or auscultated a chest. There were no recitations; neither were there ward classes nor other means for actual contact of the student with disease. * * * That we have become respectable practitioners, or possibly more than respectable, is due not so much to our early opportunities as to later incessant midnight labors. Now," says he, further, "we may congratulate ourselves that the majority of the medical schools of the country have a graded course of four years, each covering not less than six, and often eight months; not only lectures, but in many instances, constant and searching recitations; almost a score of laboratories in which each student actually does the work of observation and experiment; ward classes in which every man is obliged to train his eyes, his ears, his fingers, and his judgment in the examination of patients in every department of medicine; to ferret out the history of the cases brought before him, ascertain symptoms, seek for physical signs, reach a diagnosis, determine the treatment, and often actually to prescribe and to assist at operations."

The novice of to-day, seated upon the benches before me, who enters upon the enjoyment of the embarrassment of riches provided by the medical college curriculum, will often feel like saying with the quaint little maiden, Margaret Moore: "Since the little Wisdom I have Capacity to acquire so oft gives me the Headache to Distraction, I marvel not at Jupiter's Payn in his Head when the Goddess of Wisdom sprung therefrom full growne!"

To avoid the sorry results of overstrain it is necessary to remember that one may readily overwork the mental digestive apparatus, and hence constantly suffer from mental dyspepsia. Only a certain amount of knowledge can be digested and assimilated in a four years' course of study. One does not attempt, in starting upon a voyage, to eat enough to last until his journey is at an end, but carries supplies with him upon which he may draw, as necessity demands. The medical school is but a port where supplies are to be laid in which will enable the student voyager to steer her vessel for the harbor of her choice after her graduation. *Foundation principles* must constitute the cargo of each and every one, however diverse the specialties entered upon in her subsequent career.

Carl von Klein, of Germany, tells us that "if the practical physician desires to preserve his enthusiasm for science, and not to remain a blunderer in all the branches of the vast number of varied professions represented by medicine to-day, he must not study medicine in detail to-day and to-morrow surgery and obstetrics the next day, for he will fail. He will only feel satisfied when he has mastered one branch, for it is only possible in one branch to carry on researches in detail, although one should not give sole attention to one, ignoring the others. This detail work demands post-graduate study. To such of my audience as are medical students I would say, the dictum of Socrates 'I am wise because I know that I know nothing' is a good motto with which to begin the year's work. The spirit of the philosopher will make you more appreciative of the guidance and direction of your teachers who

have been long launched upon the professional seas and who have arranged your courses of study for you.

The attempt often made by the medical student to supplement the work offered her by additional courses, selected according to her choice, ends in robbing her of the time necessary for the digestion and assimilation of the facts her regular course of study affords. Knowledge cannot be poured into the mind, it must be obtained by study.

Familiarize yourself now with the tools of your trade by diligent work in the laboratories and in the dissecting room and clinics, so that the various methods of investigating disease become familiar to you. You will not then find yourself panic-stricken when calamity faces you in the future in the form of a patient. As the renaissance of medicine in the past owed its impulse to the study of *anatomy*, the medicine of the future is, I believe, to be stimulated to higher development mainly through the careful study of the minute details of *pathology*.

In branches, such as surgery, which require considerable practice and manipulative skill, do not expect to become experts during your college course. Surgery, general and special, is essentially a post-graduate study, and requires long hospital apprenticeship and courses in post-graduate schools for its thorough acquirement. The progressive physician or surgeon must be prepared ever to be a student. In an article entitled the "Influence of Lomis on American Medicine," found in the last issue of the Bulletin of the Johns Hopkins Hospital, Prof. Osler represents the methods of study necessary to the attainment of a high degree of excellence in medicine.

A perusal of this paper should certainly disabuse one's mind of the thought that medical knowledge may be easily acquired. Hunter used to spend every morning from sunrise until eight o'clock in his museum in preparation for the work of the day.

Harvey spent eight long years in investigation and research before he published his views of the circulation of the blood. Jenner made observations and experiments for a period of twenty years before he announced his discovery concerning vaccination. Sir Charles Bell's investigations in connection with the nervous system occupied his mind for forty years before he laid his last paper before the Royal Society. We must be prepared in like manner to "spend laborious days" if we would be of service to science. Upon the slab of a quiet grave in Mentone, beneath which rest the mortal remains of the great historian, Richard Henry Green, are inscribed the words, "He died learning!" No crown that fame could place upon you would more surely entitle you to be remembered among the great.

In giving you these suggestions concerning the garnishing of your minds it may not be amiss to remind you of the instructions given us concerning the clothing of our bodies by the great Professor Tenfeladrockh, of the town of Weissnichtwo (the abode by the way, also, of the ubiquitous Mrs. Grundy).

According to Carlyle, Herr Tenfeladrockh was the author of a system of philosophy entitled the philosophy of clothes. In his lectures he expounds the moral, political, and even religious influences of clothes, and asserts that man's earthly interests are all hooked and buttoned together and held up by clothes.

Well do most women, at least, understand the influence of the adornments of dress. The campaigns and conquests of social life would be as impossible without them as the achievements of actual warfare without arms and ammunition! The highest art in dress, however, is that which has due regard to the eternal fitness of things." The *adorned* woman of society life is as much out of place in the workshop, office, hospital ward, or operating room as a vase in a kitchen. Seeing her there we cannot but agree with Herr Tenfeladrockh that clothes which are supposed to give us individuality, distinction and social polity, threaten at times to make naught but clothes-screens of us because of their unfitness.

All the world is disposed to regard dress as an index to character, and, therefore, naturally questions how a man or a woman of keen insight and a keen sense of propriety, who has real thoughts to communicate and earnest deeds to perform, can resolve to emit them in a shape bordering so closely upon the absurd as the fashions of social life are often disposed to dictate.

Neatness and *sobriety* should be characteristic of the worker's dress. Neatness, indicative of cleanliness and carefulness, and sobriety in color and style, reflecting the complexion of the thoughtful mind, and introducing no element of distraction by striking or startling effects.

A mind concentrated upon work and a body suitably attired are necessarily associated with dignity of demeanor—the spirit of *noblesse oblige* which leads to the entire obliteration of the thought of self in the attendant of a sick room whether nurse or physician. This spirit alas! we do not always find! I was told this summer of an English physician, who, upon visiting many of our large hospitals, condeemed most severely the frivolity and flirtations, the criminal thoughtlessness and talkativeness—in fact the total disregard of hospital discipline displayed by many of the nurses, students, and physicians whom he had observed. Whether the mother-country, being older, has outgrown these humiliating crudities of conduct or not, I cannot say. Certain it is that we must confess that our own observations prove that many under training as nurses and physicians here have yet to learn that inattention, flippancy, and unseemly entertainment are as unpardonable on the battle fields of disease as the like actions would be on the part of the soldiers and officers of any other trained army in active service.

Louis XV. of France is said to have entitled his physician, DeQuesney, "my thinker," and as part reward for his valuable services to have granted him, as armorial bearings, three flowers of the Pansy. Our familiar name for this charming little flower is thus French in origin —La Pensée. The Greeks considered it a panacea for all diseases and sorrows—an "all heal"—hence its older appellation of "heart's ease." The dignity and distinction of the physician's office could not to my mind be better represented than by this striking floral emblem. By it we are set apart as the "thinkers" for humanity—the sages whose unremitting toil it must be to become the healers and deliverers of mankind—the dispensers of heart's ease.

THE SURGICAL TREATMENT OF GOITER.*

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I beg to exhibit six patients on whom I have operated and a seventh who was apparently cured or at least relieved of all her general symptoms as a result of evacuation of an abscess that formed spontaneously.

Three of the cases occurred in sisters aged 33, 31 and 29 years, respectively. There was no other goiter in the family. The patients are of Scotch-Irish-Welch extraction and came from a region in which goiter is practically unknown. They all noted from childhood a peculiar shape of the neck. In two a distinct lump developed at about the tenth year; in the third no growth was noticeable until the period of gestation. The goiter was parenchymatous in two of the sisters, cystic in the third.

The fourth case was a native of Austria, 33 years old, who came from a region in which goiter was common. No member of her family is similarly afflicted. She noticed her neck to be peculiarly shaped when a schoolgirl. A lump developed when she was carrying her first child.

The fifth case, without a goitrous history in the family, was in a woman, aged 33, who noted the development of a tumor in the neck when 21 years old. This grew with special rapidity during the period of gestation.

The sixth case was in a man, aged 30, of Irish parentage. There was no history of goiter in the family. He first noticed a lump in the neck when he was twenty years old. Shortly before operation he became involved in a fight and was seized by the neck. As a result the tumor swelled greatly and became extremely painful.

* Abstract of a paper read before the Philadelphia County Medical Society, September 22, 1897.

The seventh case, in which cure followed suppuration, occurred in a woman aged 33, with no goiter in the family history. The tumor was four years old. Without cause it swelled rapidly, became extremely painful and hot, and symptoms of septic absorption developed. Incision evacuated a half pint of pus and broken-down blood-clots.

With one exception, all these patients suffered from headache, more or less sleeplessness, recurring distressing attacks of cardiac palpitation and shortness of breath. In two, there was slight exophthalmos. In all but one, symptoms of neurasthenia were pronounced. A transverse curved incision, with its convexity downwards, was made in each case. In one enucleation was attempted and was accompanied by violent and life-threatening hemorrhage. Previous ligation of the vessels would have made this operation a perfectly safe one. The patient, however, convalesced promptly. In two cases paroxysmal seizures occurred 24 hours after the operation. In the remainder the convalescence was uninterrupted. In all there was much oozing, necessitating a change of dressing within the first twelve hours. This took place from the cut surface of the thyroid, was venous and was due to the congestion incident to vomiting, following ether-narcosis. In three of the cases the wound was closed without drainage; in the remainder the wound was drained in order to provide for this oozing. In all but two of the cases the percutaneous suture was used. The interval following the operation varied from eighteen months to two years. The patients are all well and the scar in every instance is insignificant; in two cases it is scarcely visible. In addition to the relief of the very great deformity, the nervous symptoms have entirely disappeared, with one exception.

The operation performed was, with the exception of enucleation in one case, practically that commended by Kocher. The transverse incision is perfect, as it gives free access to the operative area. Apposition of the margins of the wound is more accurately effected by suturing, and after healing a much less conspicuous scar is left. This incision was carried over the most prominent part of the goiter, from about the mid-width near the sterno-cleido muscle, to a similar point on the opposite side of the neck. When the goiter is very large the angular incision is to be preferred. This begins over the bulge of the sterno-mastoid muscle at the level of the thyroid cartilage and runs transversely in the direction of the wrinkles to the middle line of the neck, then downward to the suprasternal notch or the middle of the manubrium. After division of the skin the fascia uniting the sterno-hyoid and sterno-thyroid muscles on each side is divided and these muscles either retracted or cut across. The sterno-mastoid muscles are then well retracted and the fibrous capsule investing the goiter is cut through until the surface of the tumor is reached. This presents a typical brownish or bluish color and often has ramifying over its surface enormous veins. By means of the fingers and gauze sponges the fibrous capsule is separated from one lobe of the tumor, the veins being ligated as they are encountered. This lobe can be lifted upward and forward, exposing its posterior surface. By this means isolation of the thyroid artery and vein is possible, with the application of ligatures to these structures. The upper or the lower portion of the lobe is now turned out, accordingly as the one or the other is the more readily freed from its usually slight adhesions, and the vessels are secured by ligatures. A stout ligature is then passed beneath the isthmus, and the tumor is either removed completely, provided the other lobe of the thyroid be healthy, or is split and from its substance cysts and nodules are enucleated. Traction upon the isthmus or tightening the ligature readily controls bleeding. Freeing the goiter from its capsule is greatly facilitated by dry gauze sponging, the upper cornua of the tumors being turned out first, and the superior laryngeal vessels ligated. The main operative difficulty is in overcoming adhesions posteriorly. In one case these fixed the tumor to the deep cervical fascia covering the pre-vertebral muscles. Care was taken to thoroughly isolate the inferior thyroid arteries before ligating them, lest the recurrent laryngeal nerve should be injured. When the portion of the thyroid lying in relation to this nerve seemed healthy, it was cut across and left in place, thus effectually guarding against injury

of the nerve. Care was taken to secure each bleeding point before proceeding further with stripping of the capsule. The amount of blood lost was extremely slight. In all cases a portion of gland was left equal in amount to at least two-thirds of the bulk of the normal thyroid. In one instance more than this was left, and this is the only case in which the nervous phenomena were not promptly relieved. One case had been subjected to three months' treatment with electricity applied by an expert. This was without avail, but the scars resulting from the treatment are, even now, more conspicuous and disfiguring than that which shows the position of the transverse incision for removal.

As the object of this communication is to show the results of operation in the patients who have presented themselves, a discussion of the pathology of the disease is unnecessary.

Clinically, goiter can be classed under three general headings:

1. Tumors, either smooth or large, solid or cystic, which occasion neither local nor general symptoms and are annoying only because of the deformity they cause.

2. Tumors which by mechanical pressure on important structures cause pronounced local symptoms. Chief of these are pain, tenderness, distinct alteration of voice and cephalic congestion. The local symptoms caused by these tumors have no necessary relation to either the size or the consistency of the growth. In this group there are added to the deformity more or less disability and suffering of intermitting intensity and a distinct element of danger.

3. Tumors which, either with or without local pressure symptoms, are associated with profound systemic disturbances, the chief of which are grave neurasthenia, tachycardia, tremor, insomnia and exophthalmos. In this group the symptoms are crippling and usually progressive, and the whole mentality is changed. The growth may be small or large. Contrary to the generally accepted opinion, it is not usually more vascular than the solid and cystic goiters of the first two groups, nor histologically can there be detected any difference in the processes of hyperplesia, infiltration and degeneration characteristic alike of the exophthalmic, the solid and the cystic goiters. Even symptomatically there can be drawn no sharp distinction, as it is common enough to observe an ordinary goiter in the course of its growth gradually become associated with symptoms of Graves' disease.

Of the three clinical groups of thyroid enlargement described, cases in all are proper subjects for surgical intervention, provided a careful trial of medical means, including electricity, has proved unavailing. In the first group of cases, *i. e.*, those in which the tumor troubles only because it is unsightly, operation may be deferred when the growth is stationary or retrograding and when it is not a source of constant mental discomfort to the patient. When tumors of this first group are steadily increasing in size operation should be undertaken promptly. All tumors of the second class, *i. e.*, those giving rise to local or reflex pressure-symptoms, should be subjected to operation. The indications are urgent when there is recurrent dyspnea. In tumors of the third class the beneficial effects of surgical intervention are so striking and the mortality following operation is so slight that on the failure of medical treatment there should be no hesitation in advising ligation or partial thyroidectomy.

A causeless, comparatively rapid, relentlessly progressive solid, nodular or smooth, rounded, painful tumor growing from the thyroid gland in a woman over 40 years old should always suggest the possibility of malignant degeneration. In men this degeneration is less common. It is difficult to formulate the prognosis of untreated goiter, as statistics bearing on this point are not available, but when the thyroid is once permanently enlarged there is a tendency towards steady growth, and the patient with a small goiter, which is annoying only because of deformity, can count, as a rule, on a slow progressive increase of this deformity and a more or less pronounced neurasthenic condition due to the growth and only to be cured by its removal. Exceptionally the goiter disappears or remains stationary. In a small percentage of cases increase in size occurs rapidly, causes more or less pronounced pressure-symptoms and is associated with an aggravated neurasthenia, with dyspnea and irregular heart, especi-

ally well marked. In a smaller percentage of cases the disturbance of the vasomotor mechanism of the thyroid circulation becomes especially noticeable and a pulsating tumor is associated with the characteristic symptoms of exophthalmic goiter. In a still smaller percentage of cases the symptoms of cachexia thyreopriva develop. Exceptionally the enlarged thyroid undergoes malignant degeneration.

As for treatment it is clearly shown that by general bracing, hygienic, climatic and electric treatment many cases of goiter, particularly those of the exophthalmic variety, may be greatly benefited. Sometimes they are cured. In the recent parenchymatous goiters of young people iodin and the iodids have yielded good results, though the common inefficacy and possible danger of this medication is now generally conceded. Thyroid extract may be expected to cure a small percentage of cases. According to Bruns, however, complete recovery can only be looked for as a rule in young children. But few adults are cured and even in older children the enlarged gland does not diminish to its normal size. Graves' disease is a distinct contra-indication to thyroid medication, as the symptoms of this affection are supposed to be due to a saturation of the system with the normal or perverted thyroid secretion caused by increased blood-supply and hyperplasia of the secreting cells.

Galvano-puncture and injection have both been employed in some cases. An anesthetic is not required and excepting in cases complicated with dyspnea, confinement to bed or to the house is not necessary. In the treatment of parenchymatous goiter the electric needle has proved most unsatisfactory. The procedure is painful and is often followed by inflammatory swelling and requires weeks or months for its completion. Injections of iodin or of iodoform-emulsion are probably about as safe as the cutting operation. The injection should be repeated every third or fifth day and is especially indicated in the treatment of parenchymatous enlargements. Fibrous and cystic goiters are not amenable to this form of treatment. Brunet records 59 cures in 88 cases treated by injections of iodin. Five or ten drops of the tincture were injected at each treatment. A number of deaths usually attributable to embolism are reported as a result of the injection of iodin. Garré injected iodoform-emulsion in 140 cases without a fatality; about 12 injections were given in each case, 1 grain of iodoform in ether and olive-oil being employed.

The mortality of operative treatment, by which is meant enucleation or partial resection of the enlarged thyroid, has fallen from over 40 per cent. to less than one-half per cent., in over 1,500 cases operated on by four surgeons. In over 200 cases collected from medical literature by Dr. Francis Patterson and reported by over 30 surgeons, the mortality was about three per cent. Hence it is clear that the operation so little threatens life that its performance may be advised even though there is no more pressing indication for it than the relief of a distressing deformity. The hemorrhage is readily controlled. Dyspnea is commonly relieved at once by division of the deep cervical fascia and turning the goiter forward, though when the tracheal rings have suffered from pressure-absorption the larynx may readily be kinked or compressed and the introduction of a long flexible tracheotomy-tube will be necessary. The anemia often complicating exophthalmic goiter may render the patient peculiarly susceptible to shock. The immediate sequence of the operation may be thyroid intoxication, which is usually transitory; hemorrhage, easily controlled by pressure, consecutive hemorrhage requiring opening of the wound and ligature; dyspnea, due to mechanical irritation of the larynx and trachea and in part probably to irritation of the recurrent laryngeal nerve, relieved by inhalations of oxygen; sepsis being provided against by most scrupulous attention to surgical cleanliness and, when the wound has been infected as by vomiting, by gauze drainage. The remote effect of the operation would be myxedema due to degeneration of the portion of the thyroid left, readily controlled by feeding with thyroid extract; and recurrence of the growth, which is noted in about 1 per cent. of the cases. The operative danger is so well under control, the percentage of radical cures is so high and the ultimate ill effects are so entirely avoidable that it is difficult to understand

why partial thyroidectomy is not more popular in Philadelphia.

Dr. Patterson has found from a study of the reports of five hospitals in this city, namely, Jefferson, University, Pennsylvania, Presbyterian, and Episcopal, that in the last ten years (five years at Jefferson) there were treated in these institutions, usually in the Out-patient Department, 182 cases of goiter, of which 5 were operated on, with 1 death. It is evident that a very small percentage of goitrous patients apply for hospital treatment because of the belief that the affection is beyond help, excepting at a grave operative risk; nor is this belief confined to the laity.

The object of this paper and the exhibition of the patients, together with a summary of what has been done in this direction in other parts of the world is to show that the operation is a safe one and that the results are as satisfactory as from any other formal procedure in surgery.

CURRENT LITERATURE CONDENSED.

Hypnotic Suggestion.[1]

The author produced a subject illustrating the phenomena of hypnotism and catalepsy, showing the manner in which he had used it in his practice, and the beneficial effect he had obtained in an individual case. The subject, who kindly volunteered in this instance, was a personal friend of the author of the paper, an intelligent and well educated man. Before commencing the demonstration, Dr. Franklin stated that the prevalent opinion that a hypnotic subject must be of deficient will power was the reverse of the truth, and also that his co-operation was an absolute necessity for the success of the experiments. The subject must be capable of concentrating his attention for a few moments, and must try to assist the director, or the efforts of the latter would fail.

He then had his friend forcibly clasp his hands and concentrate his attention on keeping them so, while he stroked his temples. In a few moments he informed him that he was unable to unclasp them and requested him to make the attempt, which failed, as he had promised.

The subject was now in the first stage of hypnotism and subject to any directions of the demonstrator, always providing these directions were not such as the subject would refuse to follow in his normal state. If any suggestions to perform acts repugnant to his waking disposition were made, the demonstrator stated, the subject would resist them and the result would be his waking from the hypnotic condition.

It was now found that on directing the subject to go to sleep he would do so, and that on placing his arm in a horizontal position it was maintained so, in this instance for twenty minutes, an utter impossibility for anyone in a waking state, and one that would result in agony to the cataleptic on waking, unless he were impressed with the fact that he would wake free from discomfort and remain so.

Several interesting proofs of the genuineness of the condition were shown, and then the suggestion made that the subject should, five minutes after awakening shake hands with a designated stranger present, and address him by name, he of course being told the name while under hypnotic influence. The direction was followed five and one-half minutes after leaving the chair in which he had been sitting, and while the discussion of the paper was taking place.

Most of the members present had no experience with the phenomena. Dr. J. S. Sinexon had seen hypnotizing used by Dr. Franklin to treat an irritable scar on the wrist of the gentleman just shown and had found the scar too tender to allow counting the pulse on that wrist. After the first seance the arm was handled and after a second one, a few days later, the scar was painless. He had applied it to the cure of hysteria, but thought that disease an unfair test of the

[1] Dr. C. P. Franklin, before the Associated Physicians and Surgeons of the Charity Hospital of Philadelphia.

method as it is liable to yield to anything.

The following list of troubles should yield to this method. Acute rheumatism, muscular tremors and spasms, insomnia, pain from any cause, hysterical aphonia. In hysterical aphonia there is no anatomical change, but the victim can not produce articulate words, although able to produce sounds. In Krafft-Ebing's "Psycopathia Sexualis" nothing else is expected to give any probability of cure.

Dr. Tait proposed trying the process as a preventive of seasickness in a trip which he intends making, and promised to report the result.

Mr. A. (the subject) said that he believed he could recollect all that he did while in the state, but found himself mistaken. He spoke of the sensations of passing through the air, when he was lifted and laid on a chair, as exceedingly pleasant and as lasting apparently a long time, whereas it, of course, took place in the fraction of a minute.

Dr. Hirst had seen the method used with success in several disorders, hyperemesis gravidarum furnishing a good example. He considers it to give as much scope for study as some of the medical specialties and thinks that one who views it in any other light is entirely ignorant of the subject.

Dr. Sinexon had his interest in the subject awakened some time ago, and thought a remark which Bulwer, in his "Strange Story" addresses to one of his characters, very appropriate. "Fellow creatures, affected by maladies your pharmacopeia has failed to reach, came to me for relief and they found it. The effect of imagination, you say! What matter if I directed the imagination to cure? You cry that truth is profaned when your dogmas are questioned. You have meted the dominions of nature and, where your eye halts its vision, you say: 'there nature must close.'"

The Care of the Perineum in Head-Last Deliveries.[2]

In the *Centralblatt für Gynakologie* for May 15, Dr. W. Rubeska, a professor in the Prague school for midwives, remarks upon the paucity of directions in the text-books of obstetrics as to the management of the perineum during the birth of the after-coming head. He quotes a description, by Ostermann, of Berlin, of his method, and then gives an account of his own, which, he remarks, must often have been employed, so simple is it, although the first published description of it appeared only so recently as in 1893, in his "Lehrbuch der Geburtshilfe für Hebammen."

As soon as the child's mouth has cleared the vulva, whether extraction or expression has been employed, he seizes its feet with one hand and lifts it high over the mother's abdomen. Then with the other hand he manipulates the head, stretching the fingers out over the perineum and inserting the thumb into the child's mouth in such a manner as to have it rest on the alveolar arch of the upper jaw. The hand thus has perfect control of the head, the thumb holding it back forcibly if it shows a tendency to advance faster than the elasticity of the perineum warrants, while at the same time the outstretched fingers press the cranium forward against the pubic arch, and thus relieves the perineum of its tension. If the greatest circumference of the head has been expelled, the hand readily lifts the head out independently of the pains.

Since the child has its mouth and nose free, it can breathe, and, in case of need, the mucus may be swabbed from its mouth and throat with a flexible catheter; consequently there is usually no longer any occasion for haste in extracting the head. At this time there is no need of traction on the head; the abdominal muscles will drive it out, or it may be lifted through the vulva with the hand. The author thinks his method has the advantages over Ostermann's of simplicity and ease of execution, also that of not requiring the co-operation of the nurse or other assistant. He recommends it on the strength of a large experience.

Transcendental Surgery.[3]

The writer says it is an open secret that the results of asepsis are scarcely any improvement over antisepsis. The most scrupulous care by conscientious surgeons

[2] *N. Y. Med. Jour.*

[3] Prof. J. Mikulicz in *Deutsche Med. Woch.* (*Pacific Med. Jour.*)

and assistants is insufficient to guarantee absolute asepsis as an unquestionable fact. He has recently adopted in his clinic two innovations which he considers long strides toward the attainment of this ideal, consisting of gloves for the operator and assistants and a covering over the mouth of each person in the room.

He finds from a long series of tests that it is impossible to render the hands perfectly aseptic. The manipulations required of the surgeon's fingers bring to the surface germs deeply hidden in crevices impossible to reach by the most vigorous disinfections. He has therefore begun to wear gloves at his work—not the rubber gloves recommended by Manteuffel and others, nor the long silk gloves advocated by Perthes in the *Cbl. f. Chir.*, of July 3, but the cheap gloves sold as "fine servant's gloves," waiter's gloves, which he buys in Breslau for 65 cents a dozen. They are linen or cotton and can be washed and boiled, and used over and over again. He first disinfects his hands as carefully as possible with the alcohol-sublimate method, and then draws on the gloves. They do not interfere with the operation, and even allow a firmer grasp of the threads and tissues. If the operation is short and aseptic, one pair of gloves is sufficient, but if not, he changes for a fresh pair two or three times, at the different steps of the operation. His assistants also wear the gloves, and change at the same time. If absolutely necessary to use the bare finger, he removes the glove for the purpose. Of course he does not wear them when opening up an infected focus.

The constant agitation in regard to improved methods of asepsis and the catgut question, drainage, etc., proves that surgeons are not fully satisfied with the present methods at the best, and Mikulicz's suggestions have already been adopted by others. Kuster, for instance, has begun to wear the gloves and announces that he is pleased with them in every respect.

Mikulicz has also found that germs are disseminated in the air from the mouth in speaking or coughing, floating on tiny bubbles of moisture. As moist germs are much more dangerous than dry ones, to reduce this evil to the minimum he limits the number of persons present at an "asepsis operation" to the smallest number possible, not even admitting more than six to ten students at most, and all present wear a sterilized piece of mull over their mouth, fastened to their sterilized cap; it can also enclose the beard if there is one. Gestures take the place of words as much as possible. Flugge, the bacteriologist, considers that a surgeon with a cough or a tendency to sneeze, has no right to attempt an "asepsis operation." The germs that may linger on a patient's skin after disinfection are not usually so virulent as those on a surgeon's fingers, but still Mikulicz considers that drainage is frequently a source of infection as the germs of the surrounding region find their way into the wound along the drain, especially if near the anus, etc. He never attempts an "asepsis operation" in the clinical amphitheatre before a crowd, but floods everything there with antiseptics. He recommends all surgeons to use antisepsis in operating at the residence, as only a perfectly aseptic room in specially equipped institutions will insure success.

König acknowledged at the recent German Congress of Surgery that he had learned from experience that suppuration of the knee joint did not occur after patellary suture if the finger did not come into actual contact with the tissues, which is an argument in favor of gloves; even Kocher's painstaking technic has failed to prevent suppuration in 8.7 per cent. of his radical hernial operations.

Fatal Hemorrhage from the Nose and Pharynx from Unusual Cause.[4]

The following source of hemorrhage, so far as the author knows, is in some respects unique in otologic and rhinologic literature.

H. W. C., aged 24, male, at the Cripple Creek fire, April 24, during an explosion, was struck on the left jaw, causing a severe hemorrhage from the nose. He was carried to the side of a hill where he lay for several hours, during which time the hemorrhage continued. Careful examination revealed no fracture of the jaw, but considerable contusion of the soft parts. His condition rapidly improved without especial treatment, and May 4

[4] Robert Levy, M.D., in the *Laryngoscope*.

he was discharged at his own request. May 9 he was admitted to a hospital, very weak, anemic; lips, conjunctiva and skin blanched. Since leaving the first hospital he had had several serious hemorrhages from the nose and pharynx. His posterior nares contained plugs which had been placed there May 2. The plugs were allowed to remain until May 13, when on account of the pain, odor and increased temperature—102 4-5° — they were removed. He gradually improved. May 26 he began complaining of pain in the left ear, and progressive deafness. The pain was at first localized to the floor of the meatus, but subsequently spread to the mastoid process and to the area immediately in front of the ear. His temperature gradually rose to 102 1-5°. He was examined, but nothing abnormal found in the appearance of the meatus, the external auditory canal, or the membrana tympani. Several small hemorrhages from the nose occurred during this time, but were easily controlled by pressure and plugs of cotton in the anterior nares. June 1 the pain ceased, the temperature fell to 99°, and a small amount of discharge exuded from the ear. At 4 A. M., June 2, while turning in bed, the patient had a severe hemorrhage from the nose and throat.

Ordered plugging with cotton saturated in hydrogen peroxide. A few hours later the hemorrhage had ceased, but patient complained of large clots in naso-pharynx, which were continually being swallowed. The patient's appearance was that of one nearly ensanguinated. Absolute quiet was ordered; a nourishing liquid diet; strychnia and iron and saline enemata. For several days the improvement was rapid, but the past history of the case made us extremely cautious in allowing the patient to move about. In spite of the most stringent orders, he managed surreptitiously to leave his bed on the morning of June 8. He walked a distance of fifteen or twenty feet, whereupon a violent hemorrhage took place. He immediately went into collapse, and died the same day at 9.25 P. M.

An autopsy revealed:

No blood in the meningeal vessels; dura mater not adherent; a small long white clot in the superior longitudinal sinus, but no thrombus; in the middle fossa, at the suture of the temporal and sphenoidal bones, posterior to the foramen ovale, there showed through the meninges from above a discolored area the size of a half cent. On reflecting the membrane at this point, there was found a small collection of grayish-brown, purulent, disorganized material at the opening of and filling the foramen spinosum, which opening seemed larger than normal and irregular in outline. A probe was introduced and passed forward, downward and to the right, and was felt by the finger in the mouth to touch the upper part of the soft palate.

The course of the probe was evidently through the Eustachian tube, the septum between the foramen spinosum and the Eustachian tube having been destroyed. Further examination revealed the existence of a purulent otitis media involving to a slight degree the mastoid antrum, the roof of the middle ear, and extending forward to the anterior portion of the petrous bone. Necrosis in this course had taken place, the process continuing into the foramen spinosum, and from there into the Eustachian tube. The middle meningeal artery, which passes through the foramen spinosum, had been eroded to such an extent that where the opening communicating with the Eustachian tube, was discovered, the vessel seemed completely disorganized. The source of the hemorrhage was therefore clearly from the middle meningeal artery through the Eustachian tube into the naso-pharynx. The membrana tympani not having been ruptured explains why there was no hemorrhage from the external auditory canal.

It is interesting to consider the cause of the suppurative otitis, in view of the traumatism which was associated with violent hemorrhage, and in view of subsequent developments. Whether the disease was of long standing, the final perforation of the artery taking place coincidently with the severe blow, or whether the original hemorrhage was from a different source, the otitis suppurativa being the result of the plugging of the posterior nares, must remain a matter for conjecture.

Fatal hemorrhages from suppurative otitis media, followed by necrosis and perforation of the internal carotid, are not

frequent. Politzer, however, has collected nineteen cases. But hemorrhage from the middle meningeal, occurring in the course of otitis suppurativa and in the manner illustrated by this case, must be of the extremest rarity.

Treatment of Circumscribed Pelvic Hemorrhage.[5]

To avoid the confusion caused by the term "pelvic hematoma," "pelvic hematocele," "intra- and extra-peritoneal hematocele," we should distinguish two clinical varieties of pelvic hemorrhage (1) free hemorrhage being active hemorrhage into the abdominal cavity without tumor formation, and (2) circumscribed hemorrhage, in which active hemorrhage has ceased and the blood has become encysted, forming a distinctly palpable tumor.

The treatment of free hemorrhage should always be by immediate abdominal section. This variety, however, constitutes not more than one-fourth of all cases of pelvic hemorrhage.

The majority of cases seen belong to the variety called "circumscribed." They are cases that have been delayed, or have been unrecognized, or have been accidentally stumbled upon some time after recovery.

Not more than 40 per cent. of all cases of circumscribed hemorrhage require surgical interference. When called to a case of this kind, unless there be a distinct indication for immediate operation, it is best to place the patient at absolute rest in a hospital or under reliable supervision. Cases that continue improving should be left undisturbed until well. Cases that show any signs of growing worse must be operated upon without further delay.

Of thirty-five cases thus treated eighteen have been restored to perfect health without operation. Of the remainder one refused operation, one left hospital before full recovery and fifteen were operated on with four deaths. Three of the deaths were due to far-advanced sepsis previous to operation in cases not recognized by the attending physician. The details of twenty-three cases have been previously reported, and twelve are submitted with the present paper.

[5] Marcus Rosenwasser, M.D., in *Am. Jour. of Surg. and Gyn.*

This rather extensive experience with cases of circumscribed pelvic hemorrhage leads to the following conclusions:

1. That unless they require immediate operation for cause when first seen, they can be submitted to careful supervision in hospital or home without danger.

2. That when thus watched, more than one-half will get well without operations by keeping them at absolute rest for an average period of six to eight weeks.

3. That when they cannot be watched, or refuse to rest, early operation is to be urgently recommended.

4. That operation is necessary only for special indications, of which the most important are sepsis with or without suppuration, recurrent hemorrhage, growth of tumor, non-absorption after reasonable time, and compression of the pelvic viscera (rectum or ureter).

5. Abdominal section is to be preferred to vaginal incision in most cases.

Bacteriophobia Up to Date.

In these days of microbes and contagion from all things, a new set of sanitary regulations for general guidance ought to be jumbled up into the form of an act and shoveled before the Viceroy's Council in order that it may become a law. A few suggestions like the following might help the Deputy Legal Remembrancer:

Every hotel, hostel, bar or restaurant keeper must set apart a special knife, fork, spoon, plate, glass and table for each customer, and the customer's name must be inscribed.

No two persons must be supplied with milk from the same cow.

No two men may kiss the same girl.

Small boys must not wear jackets that their elder brothers have grown out of.

It is a criminal offence to cut down parental pants to fit the offspring.

No person under penalty of 5000 rupees shall put his arm around the waist of another person, even for the purpose of dancing, without having first caused the antimicrobe spray to be used for several hours in the vicinity of such person.

No person shall sit on another person's lap on pain of death.

Anybody playing at Smith and Clegg will be shot.—*Indian Planters' Gazette.*

1853-1897.

MEDICAL AND SURGICAL REPORTER

Issued Every Saturday.

Editorial and Publication Offices, 1026 Arch Street, Philadelphia, Pa.

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THE BUTLER PUBLISHING COMPANY, P. O. BOX 843
H. H. KYNETT, M.D., MANAGER. WILLIAM H. BURR, M.D., ASSISTANT MANAGER.

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PHILADELPHIA, SATURDAY, OCTOBER 9, 1897.

EDITORIAL.

EXPERT TESTIMONY AND TESTIMONY EXPERTS.

The attention of the medical profession has again been called to expert testimony by physicians in connection with two notorious murder trials. THE REPORTER was so fortunate as to have a chance meeting with the prosecuting attorney in one of these trials, and to learn his informal opinion concerning some of the testifiers. From his remarks—and as well from previous information—it gathers that there is such a thing as reputation as an expert witness, pathological, or chemical, or clinical, quite distinct from reputation as a pathologist, or chemist, or clinician. In other words, it often happens that a medical man is retained in a case, not on account of absolute skill in the technical matters concerned, nor because of propinquity, but because he is known as a good witness for the side that secures him. Ethically considered, this is by no means pleasing.

THE REPORTER believes that the fault lies with judicial methods, not with the legal profession. It can see no more reason for criticizing the lawyer who tries the utmost to save the life of a worthless wretch, than for blaming the doctor who does the same thing, but in a different manner. Expert testimony, or any other kind of evidence, will never be presented in a thoroughly impartial manner in a legal case until the development of the facts is made under the direct supervision of the court. It must be borne in mind that the suggestion frequently urged to make the expert an advisor of the judge is highly objectionable from its tendency to make the opinion of the expert practically the verdict of the court. If to avoid partiality a jury of experts be substituted for the single expert, none the less must there be a weighing of opinions, and each attorney must be free to controvert evidence unfavorable to his client. In THE REPORTER'S opinion reform here, as in

most other conditions, must be accomplished "a man at a time." Neither legislation nor change of procedure will be sufficient to relieve the medical witness of the disfavor and suspicion under which he has fallen. However he be paid or employed, his good faith and impartiality must be secured by personal honesty and candor.

Two points, however, in the present method of procedure, should be radically changed. The hypothetical question should be done away with, and every possible opportunity should be provided by the court for the proper qualification of testimony. In a recent trial the court spent at least a day on the single topic of whether or not an expert chemist had eliminated certain sources of error in the test for a poison. The expert was placed on the stand and asked to detail his method of examination. This he did at length, yet, obviously, without stating explicitly all the things that he did or did not do. Then the opposition called another expert chemist to show that the examination had omitted some preliminaries whose absence made the whole test worthless. The first expert was then recalled to swear that he had actually made these preliminary tests, but that he had not thought it worth while to weary the jury with all the technicalities of the examination. Another expert was cited by one side to state that the poison in question was absent from a secretion sent to him to examine. The opposing attorney put in evidence a letter from this same authority to the effect that the poison would not be found in that secretion under the circumstances, even if it had been administered. This method of eliciting testimony on which the jury is to form an opinion is tedious, unnecessarily expensive, confusing and opposed to the well established legal principle of demanding that not only the truth but the whole truth shall be told. It would be better to allow the interruption of a witness than to waste so much time and produce so much confusion.

Experts often damage their own cause and reflect discredit on their profession by an unwillingness to admit even pardonable ignorance, or by the endeavor to represent as an absolute fact what is merely surmise or probability. In a recent trial, a physician posed as an expert, and in a legal sense was an expert as well as an ordinary witness, who admitted he had attended a woman at the time of her death, had made a necropsy and had certified that death was from natural causes, yet maintained a subsequent examination demonstrated death had been due to hydrocyanic acid as he had smelled the odor in the brain. Before making the second necropsy, his attention had been called to the possibility of poisoning by this drug, and he had gone to a drug store and smelled of a bottle to familiarize himself with the odor. In reply to a question, he had the effrontery to assert that his post-mortem had been "thorough." The identification of red blood corpuscles as human or other frequently becomes a medico-legal issue. Though the difficulty or impossibility of discriminating betweeen human and other mammalian erythrocytes is admitted by histologists and medico-legal authorities, the expert is never lacking who is willing to stake *another's* life against the possibility of his own fallibility in a particular case. A trial is now progressing in which experts have been swearing positively as to the source of fragments of bone alleged to be part of a human skeleton, and are degrading themselves to schemes devised by attorneys to confuse opposing witnesses with artificial preparations.

All this is detrimental both to the medical profession and to the cause of justice. To wait for a complete change of method of taking testimony will be tedious. The reform, at least for practical purposes,

lies with the experts and with the judges. Let honest experts refuse to appear as the exponent of a side and refuse to refute or throw discredit on the testimony of another witness, without consultation with him. Let experts, however employed, aim at truth rather than the success of a client, and let the judge use his prestige and actual authority against every attempt at partisanship. If even ordinary honesty and fairness can be secured, the slurs now so justly cast at medical expert testimony will be a thing of the past, and professional witnesses whose science can be turned at will in the direction of the larger fee will be permanently out of a job.

DON QUIXOTE.

The object of Cervantes in writing "Don Quixote" was, as he himself declares, to render abhorred of men the false and absurd stories contained in the books of chivalry."

The fanaticism caused by these romances was so great in Spain during the sixteenth century, that the burning of all extant copies was earnestly requested by the Cortes (or Legislature of the realm).

To destroy a passion that had taken such deep root among all classes, to break up the only reading which (at that time) was fashionable and popular, was a bold undertaking, yet one in which Cervantes succeeded.

No books of chivalry were written after the appearance of "Don Quixote;" and from that time those in existence have been steadily disappearing, until now they are among the rarest of literary curiosities.

This is a solitary instance of the power of genius to destroy, by a well-aimed blow, an entire department of literature.

This romance, which Cervantes threw so carelessly from his pen, and which he only regarded as an effort to break up the absurd fancies about chivalry, has now become the oldest specimen of romantic fiction, and one of the most remarkable monuments of modern genius.

Ten years after its appearance, Cervantes published the second part of "Don Quixote," which is even better than the first. It was written in his old age, when in prison, and finished when he felt the hand of death pressing cold and heavy upon him; so that both admiration and reverence are due to the living power of "Don Quixote" and to the genius of Cervantes.

A second intention or application of the poet was to depict in "Don Quixote" all or any forms of ill-judged, visionary enthusiasm, as contrasted with the simple solid sense of honest Sancho Panza. So while in one sense it is true that

> "Cervantes laughed Spain's
> chivalry away,"

in a larger view he has presented so telling a satire upon the faults and foibles of human nature, that "Don Quixote" has done great good as a practical treatise and moral philosophy.—*Curious Questions.*

RECIPROCITY IN PRACTICE.

Why should not the doctors of one State follow the example set them by the native medical men in Italy in their present crusade against foreign physicians, and induce their legislatures to debar others from practicing medicine in their States unless they can be allowed the same facilities in New York or in the other cities from which the visiting doctors may come? Of course the inequality in the standards in the different States is the chief obstacle in the way of reciprocity, and until a uniform course and a uniform method of conducting examinations are introduced, it would seem that the difficulties are almost insuperable. However, after all, the solution of the problem lies in State legislation, and that is where the remedy should be sought.—*Medical Record.*

ABSTRACTS.

THE IMPORTANCE OF THE LYMPHATIC SYSTEM FROM A SURGICAL STANDPOINT.*

In the whole domain of medical science there is no more neglected field of inquiry than the lymphatic system, and no other in which richer rewards await the investigator.

It is scarcely necessary to give lengthy descriptions of the minute anatomy of the lymphatics. Suffice it to say that, in all essential particulars, the larger canals are identical in structure with the blood vessels, except that the coats of the former are thinner. The lymphatics of the tissues and viscera resemble the capillaries in that they consist of a single layer of endothelium. The analogy in structure with the blood vessels is at once apparent. In their ultimate ramifications the lymphatics terminate in the connective tissue everywhere, forming the so-called connective tissue spaces. This emphasizes a fact of surpassing interest and importance to the surgeon, namely, that from a surgical standpoint, the connective tissue is merely a continuous series of lymphatic sacs. When the conception is grasped in its entirety that the subcutaneous tissue, the intermuscular planes, the intercellular tissue of the viscera, etc., are simply lymphatic sacs held together by a reticulum of fibrous tissue and everywhere connected by lymphatic ducts, the possibilities of the spread of infection seem endless.

The next anatomic fact of interest is that the subdural subarachnoid, synovial, pleural, pericardial and peritoneal spaces are simply lymph-sacs, in free communication with the surrounding tissues by means of stomata and lymph-ducts. Every surgeon exercises the greatest care when called upon to invade any of these cavities, but were he equally impressed with the fact that the connective tissue everywhere is simply a series of just such sacs, it might conduce to greater watchfulness in all operations involving the tissue. When we consider again that the cavities of the tendon sheaths are but lymphatic sacs, many cases of rapid and serious infection from apparently trifling wounds involving these strictures become better understood and the necessity for the separate closure of these sacs in all operations involving them, so strenuously insisted upon by Treves and others, seems reasonable.

The anatomy of the lymph-glands demands a passing notice. Three elements make up a lymph-node: the reticulum, endotheloid cell-plates, and the lymph corpuscles. Stress is laid here upon the reticulum, the importance of which will be apparent later. Physiologically, the lymph may be considered as the principal agent in the formation of the blood.

The course of the lymph through a gland is from the afferent vessels into the various sinuses of the gland and thence into the efferent vessels. Owing to the presence of the reticulum, before alluded to, the current of lymph will flow slowly, as if through a spongy filter. Thus the reticulum serves to arrest extraneous elements which are disposed of by the ameboid corpuscles. The lymph glands, then, are barriers against infection, as is demonstrated by their early enlargement and increased activity following inoculation of the tissues with pathogenic micro-organisms. Viewing the vast extent of this system and its weighty physiological functions, is it too much to say that it is the most important single element of the animal economy?

To consider the pathology of the lymphatic system in extenso would be to cover about the entire domain of surgical pathology, as there is scarcely a surgical disease in which the lymphatics do not play the chief role. It is not, therefore, my purpose to discuss every surgical disease in detail, but to run rapidly over the field, concentrating argument on two points, viz., the part played by the lymphatics in tuberculosis and in cancer.

* Edward A. Balloch, M.D., in *Practical Medicine.*

Considering first the simple loss of lymph, it may be stated as an axiom that a lymphorrhagia is fully as exhausting as a hemorrhage. This is well shown in a case recently reported by Schwinn (Annals of Surgery, Vol. XXIII., No. 5) in which a large branch of the thoracic duct was wounded during an operation for the removal of the tubercular gland in the neck.

Inflammation of the ducts themselves, or lymphangitis, is noteworthy, because of the distinction to be made between the superficial and deep forms. Any one who has seen the dense, brawny thickening of the tissues characteristic of the deep-seated form of the disease, and the extensive suppuration, often unsuspected, will agree with the statement that it is an affection demanding prompt and vigorous treatment.

The subject of occlusion of the lymph-ducts is too vast to allow of any but scanty mention. The occlusion may be complete or partial. To occlusion are due lymphangioma, lymphvarix, lymph-scrotum, lymphedema, including macrodactylia and macropodia, and finally, the various forms of elephantiasis arabum. Coming now to the affections of the lymph-nodes, it may be stated as a general proposition that enlargement of the lymph-nodes means infection somewhere. The possibility of enlargement as a result of trauma is not denied, but is rare, and it is essential that the trauma be applied directly to the gland.

The point of infection need not be near the affected gland, but the virus may traverse a long line of ducts before becoming arrested, the ducts themselves escaping injury. A familiar instance is the enlargement of the glands in the groin, the focus of infection being in the foot.

Lymphadenitis may be acute or chronic. In the acute form the source of infection should always be sought for and removed, if possible. If allowed to progress, the consequences of this form of adenitis are an irritative periadenitis, with thickening of connective tissue and the formation of pus. When pus has formed it should be given early and abundant exit by a free incision. Leaving out of account the small proportion of cases due to venereal disease and other causes, the principal causative factor in chronic adenitis is tuberculosis. The domain of scrofula has been steadily encroached upon in past years until now nothing is left to it except to be absorbed in the ever enlarging territory of tuberculosis.

Tuberculosis of the lymph-glands is a common affection among children. When the bronchial and mediastinal glands are affected the existence of the disease is often unsuspected. Thus Babes found the cervical, bronchial and mediastinal glands affected in more than one-half of all the autopsies performed at the Children's Hospital at Buda Pesth during eight years.

It may be profitable to trace the course of this disease in the cervical glands. A child with a predisposition to tubercular disease contracts a simple nasal catarrh which is allowed to become chronic. As a result of this catarrh the cervical glands become inflamed and enlarged. Upon the subsidence of the rhinitis, the glands remain in this chronically inflamed state. Here then is the opening sought by the bacilli. The soil is ready, the germs are ever present, and it is not long before a conjunction is effected. Eczema and other diseases of the skin of the face and scalp are also causative factors in this affection.

It is but lately that attention has been drawn to carious teeth as a cause of this disease. Starck (*Munchener Medicinische Wochenschrift*) was able to demonstrate the existence of carious teeth in forty per cent. of his cases of tuberculous cervical adenitis. There was a corres-direct connection between the two diseased teeth and the enlarged glands. In two cases he was able to demonstrate direct connection between the two diseases. At this time the writer has under treatment a young man: while under the dentist's care for carious teeth and disease of the alveolus at the point of the chin, a gland beneath the chin suddenly enlarged and softened, to be followed by enlargement of the glands on both sides of the neck in rapid succession. With these facts in view it may seem superfluous to emphasize the necessity of careful attention to all diseases of the mouth, nose, throat and face in children.

Whatever the mode of invasion, so soon as the glands are once the seat of

the bacilli, the series of changes common to tubercle begins to take place.

Recall for a moment the structure of a lymph-node. In describing its anatomy stress was laid upon the reticulum and its importance as a strainer for noxious products. This function is very much in evidence in this disease. The glands enlarge, inflame, and break down simply because they are endeavoring to act as barriers against the entrance into the general circulation of the bacilli of tuberculosis and their products. If the child be healthy they may succeed in their task. If not, the breaking down of one gland may be the signal for the invasion of the next in series, and one outpost after another may yield, until the main work is captured, and we have to do with a general tuberculosis, the result of the primary invasion of a single gland.

Many surgeons go so far as to advocate the removal of the cervical glands in every case where they are enlarged. My own views, based upon a moderately extended experience, are about as follows: In an otherwise healthy child, where the disease is limited to one or two glands, with no evident tendency to spread, there should be made a fair trial of therapeutic measures. On the other hand, in a poorly nourished child, of the type formerly classed as scrofulous, with many nodes enlarged, some perhaps suppurating, and with a manifest inability to resist the spread of infection, the glands cannot be too soon or too thoroughly removed.

The operation for the enucleation of diseased cervical glands may be one of the easiest in surgery or one of the most formidable, demanding of the surgeon a minute knowledge of anatomy, great skill in dissection, and a capacity to meet alarming and trying accidents. It is not a task to be lightly entered upon, hence the opinion that, in suitable cases, other means should be given a fair trial before resort to the knife is advocated.

Aside from tuberculosis of the lymphatic system itself, the lymphatics play an important part in surgical tuberculosis of all kinds. Remote as tubercular osteomyelitis may seem from the lymphatic system, it is nevertheless the fact that enlargement of the bronchial glands often precedes the disease in the bone.

Antecedent disease of the lymphatics as a factor in the causation of tuberculosis of the genito-urinary organs has not yet been fully investigated, but an experiment by Simmonds points this way. An emulsion of tubercular sputum was introduced into the peritoneal cavity of a rabbit and a few days later the left testicle was bruised. The organ swelled somewhat at first, but the swelling subsided in a short time. Two months later the rabbit was killed and, in addition to a general miliary tuberculosis, there was found a broken down nodule in the left testicle.

Tuberculosis of the tendon sheaths demands a passing notice. Recalling the fact that these envelopes are lymph-sacs it must be apparent that we have here but another example of the lymphatic nature of this protean disease. From our knowledge of tuberculosis in general, and tuberculosis of the lymphatic system in particular, the proposition is readily deduced.

The assertion may confidently be made that nothing short of complete removal by careful dissection will serve to eradicate this disease, and it is strenuously insisted upon that early removal is vastly preferable to late extirpation, both as to local and general results. Delay is useless and procrastination dangerous.

No subject to-day more occupies the time and the best thought of the surgical world than cancer and the operations therefor. If cancer in its beginning is a local disease it would surely seem as if we should be able to limit or prevent its recurrence and dissemination after operation. If we can answer the question, How does cancer spread? we ought to be able to oppose some barrier to its frightful progress. The answer is not far to seek. Cancer spreads through the lymphatics, and spreads rapidly too, as witness the following instance noted by Warren (Surg. Path. p. 644): "In a case of cancer of the breast which the writer removed recently the patient was able to state the exact date of origin, the place where the growth was found having been examined a day or two before. The operation was performed when the growth was three weeks old, and already a nodule the size of a small pea was found in the lymphatic gland of the axilla."

Resuming the thread of the argument that cancer spreads through the lympha-

tics and spreads early, there follows logically the proposition that in all operations for cancer, however early, the neighboring glands should be extirpated.

In cancer of the breast this is the generally accepted procedure, but I wish to make the proposition a broad one, and to have it take in cancer of any and all localities. Another proposition is that, in order for a thorough extirpation of all routes along which cancer may spread we need a more accurate study and knowledge of the exact anatomy of the lymphatic system. Taking mammary cancer as an example, we have a hazy knowledge that there are lymphatic ducts leading in various directions from the mamma, and that there are glands in the axilla which should be removed. As to the exact number and direction of the ducts and the number and location of the glands, our knowledge is vague. Recurrences often teach us the location of ducts and glands before unsuspected; but to learn anatomy at the expense of the lives of our patients is to pay dearly for knowledge thus acquired.

We have known for years that secondary growths often recur in the abdominal viscera after removal of a cancerous breast. We are now aware that this is due to a chain of ducts in the anterior mediastinum, which runs through the diaphragm and connects with the lymphatics of the liver. It is true that there is no spread through these ducts until the routes to the axilla have been blocked, and the after history of modern operations shows that, if the knife be used early, there is little danger from this source.

If we can remove a cancerous growth and with it all the affected lymphatics, there will be no recurrence. Anything that will help us in this endeavor will be a distinct gain. A precise knowledge of the lymphatics likely to be affected in any given case will be a long step in advance. Teachers of anatomy should see to it that their students are better taught in this respect. There is certainly a place in medical literature for a work which shall give us some definite information in this matter.

THE THERAPEUTIC APPLICATION OF CHLOROFORM IN LABOR.*

Since the primeval curse fell upon our race, and pain and anguish have been the invariable and dreaded accompaniment of man's entry into the world, to soothe woman's sorrows and conduct her safely through the crisis is an object worthy our highest effort, and one to be sought for with commendable devotion.

To accomplish this end the administration of chloroform has become routine practice, and the consensus of opinion, from a very large number of obstetricians, is in favor of its safety when thus exhibited. Careful observation for many years has tended to make me question its utility in many cases, nay, to convince me that ofttimes it adds to the peril and prolongs the trials.

That loyal devotion to true obstetric science demands that chloroform in labor should be exhibited just as other therapeutic agents in the treatment of other maladies. We forget that delivery is not a pathologic process, but a physiologic function; that it becomes pathologic only when conditions arise which convert a eutocia into a dystocia, or when the physical conformation of the pelvis is such as to prevent the accomplishment of natural delivery by mechanical obstruction, from errors in the pelvis conformation, malposition of the child of monstrosity. When labor has become pathologic in character and operative interference, manual or instrumental, is demanded, with the dangers from exhaustion from prolonged agony or the addition of surgical shock, the case passes to the domain of the surgeon, so far as the unquestioned exhibition of chloroform is concerned, just as an anesthetic is demanded in any surgical procedure as a safeguard to life. Or when the condition of the mother is such that her life is imperilled by the supervention

* JOHN N. UPSHUR, M.D., in *Atlanta Med. and Surg. Jour.*

of convulsions from existence of any of the systematic conditions which, predisposing to such complication, become active factors so soon as the stimulus of pain, or the concentration of poison to the nervous system sets in motion the morbid phenomena, which manifest themselves by an outward explosion, jeopardizing the life of the infant and of the mother.

It is not with conditions such as these that I purpose dealing, but with chloroform therapeutically applied as a causative factor, either predisposing or active, in transforming this physiologic function into a condition of some form of dystocia, making aid or interference necessary to the safe delivery of the woman.

In the first stage of the administration of chloroform, we have its stimulant effect. The second is the stage of narcosis. In the third stage, the functions of the spinal cord are abolished, as are those of the brain—this is the surgical stage; and in the fourth, we have the condition of complete paralysis—death, usually by overpowering the respiratory center first. The modes of death are from reflex irritation of the cardiac ganglia; from epileptiform syncope in the stage of stimulation; from paralysis of respiration; from paralysis of the heart; and, finally, from depression by the chloroform narcosis and shock. Chloroform diminishes the excitability of the muscular system and its capacity for work. If prolonged it exhausts muscular irritability. It interferes with oxidation of the blood, and thus becomes toxic to the fetus. Its stimulant action on the vaso-motor center is doubtful.

We need not consume time in discussing suitable cases for the administration; every skillful and experienced obstetrician will point to those cases in which the pains are nagging and exhausting—in rigid os, in great nervousness and restlessness. I think, too, that except, as just stated, it should not be administered until the second stage of labor is well established, and at the latter part of that stage, and withdrawn so soon as the occiput has passed the ostium vaginæ.

The most serious question is as to the danger arising from the exhibition of chloroform in labor, and it is with this question I would deal with great emphasis. Note the danger from reflex irritability, with incomplete anesthesia; it is at least worthy of investigation that if fatal influence from chloroform does not manifest itself here, still its effect on the heart, through the cardiac ganglia, may be potent enough to at least predispose to hemorrhage, or to weakened heart action during convalescence with the condition of debility consequent upon it. But the obstetric stage is the beginning of narcosis; it is difficult to keep the patient at this point. Lack of appreciation of what is going on interferes with voluntary assistance. One of its physiologic effects is to diminish muscular excitability, to interfere with muscular capacity for work. Pains are consequently less potent and effective in expelling the child; there is much greater muscular tire, and the natural consequence is that when the second stage is completed, danger of hemorrhage is much greater from incomplete condensation of the uterus, and I have often seen it occur. The uterus is left in such condition as to make subinvolution, with all the ills that follow in its train, almost inevitable.

The spongy condition of the womb makes the patient much more liable to septic infection. Not only so, but often have I seen labor suspended; nor on the withdrawal of the chloroform, did the uterine pains return with desirable efficiency; evidently its effect on the uterine muscle was toxic in character, and instrumental delivery became a necessity, the agent having transformed a simple physiologic process into a pathologic one—thus adding to the peril of the mother. The interference with oxidation of the blood endangers the life of the child, and I make bold to assert my belief that its use in natural labor increases the percentage of still births. Nor are these the most serious risks. Though few deaths have been reported from chloroform in obstetric practice, it is a question if death supervening in many cases within forty-eight hours after delivery, and reported as heart-clot, etc., may not have been due to the depression from long-continued administration of chloroform, plus the shock of labor. In the cases where uterine con-

traction is not interfered with, and the woman holds her breath, fixing the chest-wall to more efficiently bear down, she is put in a most favorable condition for the occurrence of epileptiform syncope, when chloroform is being administered; and the retention of carbonized blood in the brain may under such conditions overwhelm the nervous system. The dangers from chloroform exhibition are most likely to manifest themselves, however, at the close of the second or during the third stage of labor, and here post-partum, or accidental hemorrhage is the most important, and may be the focus from which may radiate other serious evils.

I would lay down the proposition as an axiom, that whenever chloroform has been administered, a full dose of ergot should be given so soon as the head is delivered or the second stage of labor completed. I have never regretted giving the ergot, and remember no case in which it is omitted that I did not repent of the delinquency. I would also suggest that it is safe practice to give a full dose of quinin (gr. x) at the beginning of the second stage of labor when chloroform is to be exhibited, or belladonna, or one or more doses of nitroglycerin; especially will this last tend to antidote the nausea following chloroform administration.

The hypodermatic injection of atropin (1-120), or strychnia sulphate (gr. 1-60), will undoubtedly add to the safety of the patient.

We must not lose sight of the fact that in the obstetric use of chloroform (which is usually conceded as the safest field for the use of chloroform), the patient is much longer under the influence of the anesthetic, and that the stimulus of constantly recurring uterine contractions of a painful character, which are supposed to antidote the ill effects of the chloroform by constantly arousing the patient, may be absent, or fail to exercise the stimulant effect usually a consequence of pain.

In the light of these facts, I most earnestly avow my belief that we, as physicians, should place chloroform upon the same platform as other drugs; not be influenced by our sympathies aroused by the pleadings of patients, or the fashionable routine practice of the day, but initiate and sustain a much needed reform in our obstetric work, chloroform being administered, as other agents, when the indications in the case imperatively demand it—not unless. He is a bold man who, invading the domain of nature, interferes with her physical processes, and places the wife and mother in a position of increased peril, and perchance the shadow of a fatal issue, or at least, a life of invalidism and suffering, where, before, the home was irradiated with the sunlight of true and unalloyed happiness.

IS BALDNESS CONTAGIOUS?

Dr. Sabouraud, in the *Annales de Dermatologie*, firmly believes that the disease is contagious, and that barbers' instruments are most common carriers of the contagion; but as customers come and go from one barber shop to another, it is difficult to trace each case to its source. Starting with the theory of the microbic origin of the disease, Sabouraud has worked out a strong chain of evidence in its support. He tells us that the typical hair of alopecia areata is found at the edge of an advancing patch, and is a stump of long hair that has remained in the scalp. It is club-shaped, or like an interrogation point. Its diameter becomes less as we go toward the root, and its color is lost. These hairs are always a sign of an advancing patch, and are not found in old patches. The medullary (or pith) canal of these hairs is normal above, altered in the middle, and completely wanting at the root. The root is not bulbous and hollowed for the papilla, but in the form of a turnip. * * * Utricules that are full and closed are found among the sound hairs. They are filled with joined strata of epidermic cells, and contain in their centres, like a larva in a cocoon, compact clusters of microbes, a pure culture of the smallest bacillus known. * * * As it grows old it may be one-quarter millimeter (0.01 inch) wide and one-half to one millimeter long, and comma shaped, or bent. The young bacilli are a little swollen in the center, and their ends are blunt. * * * Each utricle contains millions of them. * * * This bacillus is regarded as the probable cause of the disease.—*Scientific American.*

SOCIETY REPORTS.

PHILADELPHIA COUNTY MEDICAL SOCIETY.

Stated Meeting, September 22, 1897.

The President, DR. JAMES TYSON, in the Chair.

DR. EDWARD MARTIN read a paper on

The Operative Treatment of Goiter;

(See page 456.)

and exhibited six patients.

DISCUSSION.

DR. JOHN B. ROBERTS, with Dr. Martin, thought it rather curious that so few cases of goiter seem to have been operated on in Philadelphia. There must be a considerable number that should be operated on. Dr. Roberts' success with the operation in a small number of cases has been similar to that of Dr. Martin. He referred to a woman seen recently on whom he operated four or five years ago. There is a little scar, and in all respects the result is satisfactory. Dr. Roberts has not operated on a large number of cases of goiter, partly because many did not seem to need operation, while in others medical means was sufficient to reduce the size of the tumor. It is his custom to tell patients, if the tumor does not become smaller in a comparatively short time under medicinal treatment, that operation is proper and is not a very serious matter. It is, however, like all operations, attended with a certain amount of risk, and, as a rule, it is preferable to try the milder means before adopting more heroic measures.

Referring to the case of acute thyroiditis in a diseased thyroid gland, Dr. Roberts stated that he had seen a similar condition once or twice. Last spring a woman with quite a large goiter presented herself with high temperature and very much the symptoms related in the case of the young girl reported by Dr. Martin. The treatment was conducted on general principles, and there was no suppuration. The tumor diminished, the temperature fell as the inflammation subsided, and, as there was still quite a large cystic growth, it was subsequently opened with a bistoury and a great amount of bloody fluid turned out.

In a similar case seen a few weeks ago a woman came to the hospital with very active symptoms of acute thyroiditis, which it was thought would require operation because of dyspnea; but in a few days the swelling rapidly subsided. Dr. Roberts has seen suppurating thyroiditis in a man. The patient did badly and died, perhaps because incision was not made early enough. With treatment with thyroid extract it may be possible to diminish the size of the growth. Old fibroid bronchoceles can probably not have anything done for them except through operative measures.

Dr. Roberts said finally that he would not operate perhaps in quite as many cases as Dr. Martin, perhaps not quite so soon; but the results are good, the scar can be made very insignificant, the operation is not a very serious one, and the hemorrhage and other complications can usually be avoided in the hands of competent men. Much more hope can now be held out to goitrous patients than formerly. The number of cases in the United States is not so large, and thyroid extract given comparatively early in the disease will probably do much good.

DR. R. G. CURTIN said his knowledge of enlargements of the thyroid gland has been almost entirely confined to exophthalmic goiter, in which disease the enlargement of the gland rarely causes enough pressure upon the trachea or esophagus to produce even slight dyspnea or dysphagia. It can be conceived that such a deformity could be the cause of mental depression which might aggravate the existing nervous symptoms. Dr. Curtin has seen but one case in which suppuration of the gland occurred, and this was in a broken-down woman in whom ergotin had been injected into the substance of the gland. After several injections the whole gland melted down into an abscess and was discharged without incision. The abscess occasioned very little pain or constitutional disturbance. There was no enlargement of the neck following the abscess. The other symptoms continued the same. In Dr. Curtin's opinion there is not much danger from inflammation in removing the thyroid gland.

In the acute form of exophthalmic goiter the gland is very soft and vascular, so that the dangers of any operation would be thus increased. It seems that in the acute stage the removal would be more serious than in the chronic form.

The enlargement of the thyroid gland attending Graves' disease is only a symptom of a disease the seat of which is located in the sympathetic nervous system, so that the removal of the gland would not cure the malady.

In proof of the influence exerted by the enlarged thyroid, Dr. Curtin related that he has seen and heard of cases in which the thyroid did not enlarge at all; in other cases the disease continued for years before any abnormal size of the thyroid occurred.

Again the palpitation, which is generally the second of the triad of symptoms usually found in this disease, may start years previous to any enlargement of the thyroid. The sensitive condition of the nervous system would be a drawback to the operation, for the excitement and shock preceding and following might be a great disadvantage. Young women, after the acute stage, distressed by the deformity of the neck, might be benefited by the removal of the gland, through the resulting quietude of the mind and nervous system.

In a paper read before the Pan-American Medical Congress last November, Dr. Curtin showed that many of the old cystic goiters were caused originally by hereditary Graves' disease, modified by living in a limestone district, or by other influences. Such cases might be operated on if necessary, but they are usually of chronic form; consequently the patients are advanced in years and would not desire the operation.

DR. A. A. ESHNER stated that his experience had been considerably larger with cases of exophthalmic goiter than with cases of goiter of other varieties. He did not agree with the view that operation is not indicated in cases of the former. On the contrary, he thought that the indications for surgical intervention would be pretty much the same in both sets of cases, viz.: Excessive size, marked deformity and pressure-symptoms. He would go even a step further in cases of exophthalmic goiter and concur in the removal of the gland for its direct curative effect. The number of cases recorded in the literature in which partial removal of the enlarged thyroid gland in the manner pursued by Dr. Martin has been followed by amelioration or disappearance of the remaining symptoms, viz., exophthalmos, tachycardia, tremor, etc., is now so large as to leave no room for doubt as to the relation between the operation and the result. Cases of exophthalmic goiter are exceedingly rare, if they occur at all, in full-blooded blacks. Not having seen a large number of cases, Dr. Eshner could not speak with positiveness as to the frequency with which simple goiter occurs in colored persons. He referred to the case of a young colored man exhibiting an enlarged thyroid gland of some six months' standing in which diminution in the size of the gland had apparently taken place in the sequence of thyroid medication, one grain of a dried extract being administered thrice daily. In conclusion, Dr. Eshner maintained that thyroidectomy should not be undertaken until medicinal measures had been exhausted, except in urgent cases, as, for instance, when the pressure of the enlarged gland threatens asphyxia, when operative aid must be given at once. Such measures failing, and the symptoms persisting or the patient demanding relief, partial ablation of the gland is indicated.

DR. G. G. DAVIS commended the position taken by Dr. Martin. A certain feeling, so to speak, must be present in the community to support advanced measures, and the report and the exhibition of such cases as those made will tend to strengthen a surgeon in advising more radical measures than have heretofore been customary. The mortality as mentioned as being from four operators can hardly be taken as indicative of the result that the operation would give were it to be adopted by surgeons generally. Goiter is much less frequent in the United States than it is abroad, and the experience that surgeons gain here is much less than that of Continental surgeons, and there is no doubt that experience has considerable to do with the mortality. The operation is in a dangerous region, the neck, and the wound made is an extremely large one; therefore one has not only the operative procedure to perfect, but likewise the after-treatment of the wound, to carry it successfully through. The dangers are illustrated in the cases reported. In one of these there was troublesome hemorrhage; in two there was difficulty afterwards with the breathing, in other words in three out of seven there was some untoward symptom. There is no doubt that in a considerable number of these cases the operation is simple and the gland can be readily turned out. In others the operation would be dangerous, and Dr. Davis has seen an operation for the control of secondary hemorrhage, following the removal of half the gland, in which the patient died upon the table. Death took place apparently from venous bleeding, which occurred deep in the recesses of the wound in the neighborhood of the inferior thyroid veins. The veins seemed to come directly from the fascia, that is to say, to be almost indistinguishable from the fascia, and the surgeon could not promptly and efficiently enough control the hemorrhage with hemostatic forceps or by pressure, and this operator is recognized as a very excellent surgeon, so that the accident was apparently not due to lack of technical ability.

Wolff, of Berlin, advocated some time ago the enucleation of goiter, claiming that by dissecting with a small knife the goiter from its fascia, and following the knife immediately with pressure, it could be removed with little danger and slight hemorrhage. When this proposition was discussed before the International Congress in Berlin the general concurrence of opinion was to the effect that the enucleation could not be effected to such great advantage as Wolff had stated, and practically it is agreed that the ordinary Kocher method is as good as can be used. If one attempts to remove a goiter and gets below the capsule and involves the veins, the bleeding is severe and is difficult to control, and a case like this may die of hemorrhage. If, on the other hand, the operator keeps without the capsule, even in a malignant case, and by working over at the side, as Dr. Martin has said, and first controls the arterial supply from the thyroids, then the operation can often be performed with comparatively lit-

tle danger; and inasmuch as he has shown that in, it is to be judged, his first seven cases he has had no deaths, it is perfectly good evidence that a skilful surgeon, at all events, exercising proper care, can perform these operations with a comparatively low mortality. Dr. Davis felt, therefore, that the physician would be justified in recommending, and to a certain extent insisting more strongly than has been the custom in Philadelphia, on the removal of these growths. As far as the operation in Graves' disease is concerned, the experience of Mikulicz, and recent literature, tend to further the employment of excision in these cases, and this is only another instance of surgery encroaching upon the domain of medicine, for it will become more common to treat, so to speak, exophthalmic goiter by excision of the enlarged thyroid gland.

Dr. James Tyson said that his experience in the medical treatment of goiter has not been very satisfactory. The small enlargements of the thyroid gland which are slightly conspicuous often yield to medical measures, but large, well-developed goiters do not respond readily to such treatment. Dr. Tyson was impressed by Dr. Martin's paper as to the possibilities of the operative treatment of these cases, and he was much more favorably disposed towards operation than before he had heard it.

Dr. Edward Martin said that the remark in regard to thyroid feeding possibly limiting the number of cases that come to the surgeon is an apt one, and the indications for this treatment are fairly well formulated now. As a result of observations in from 80 to 100 cases it has been shown that recent parenchymatous goiters in very young children can be as a rule cured. In children of older growth they can often be cured. In adults they cannot be cured. In cases of cystic or fibrous goiter the treatment is utterly vain. In cases of exophthalmic goiter it is distinctly toxic. In the class of young people with recent parenchymatous nodules thyroid treatment certainly promises well.

In regard to interference with exophthalmic goiter, it seems to be very difficult to distinguish between exophthalmic goiter and simple goiter. Of course, a typical example of each is distinct enough, but the pathologic and symptomatologic merging is so gradual that it is difficult to draw any sharp line of separation. Exophthalmic goiter should be subjected to the same treatment as the simple variety.

The operation when indicated should be performed before these changes take place, which are to a certain extent irreparable.

It is a question whether exopthalmic goiter is a cause or a result of a nervous lesion. In the cases of goiter reported, the tumor, even in its cystic form, has been almost always associated with a pronounced degree of neurasthenia and hurried heart-action. Except in one case these symptoms have all cleared up after the operation, and the experience of surgeons who have had infinitely wider opportunities for observation is in corroboration of the fact that, no matter what the nature of the goiter, by its partial removal the symptoms are relieved or cured. There are now on record over 200 cases of partial excision of the enlarged gland of exophthalmic goiter, and the results demonstrate as well as anything can that improvement follows in proportion to the wisdom in selection of the amount of the diseased gland to take away. Of course, all discussions as to the beliefs in this matter are founded only on theory, but the theory that seems most plausible in regard to the symptoms that accompany exophthalmic goiter is to the effect that these are due to hyper-thyroidization.

Still the question is by no means clear, and no one has yet absolute proof to adduce against exophthalmic goiter being the result of a nervous lesion. Certainly to a surgical mind it seems the other way.

As to the advisability of operating on exophthalmic goiter when vascularity is a pronounced feature, the tumor being small, surgeons of widest experience will advise ligation of the arteries, three or even all of them, in preference to excision, as it is considered somewhat the safer operation; at any rate the results are extremely good.

The remark in regard to a mortality greater than that of ½ per cent. from four operators is no doubt justifiable. The fact seems marvelous. The malignant cases are, however, thrown out. In other words the figures are just a little juggled with, and it cannot yet be said to what degree, but the mortality of the cases reported by some thirty surgeons is about 3½ per cent., and that is probably about the mortality to be expected in the United States. Continental surgeons are scarcely any more careful than American surgeons, and they are no more clean. The operation requires no special skill beyond that which may be expected of any surgeon.

The object of the paper presented was to encourage the feeling that in advising a patient to have a goiter operated on, the physician is not taking any great risk, certainly not greater than that involved in the removal of a chronically inflamed appendix or in relieving chronic ovarian trouble.

The patients that come under the surgeon's notice now are those people who have passed the limit, who come for operation and often in very ill condition. It would be well to get patients to come before they reach that limit, and the result might be the relief of the suffering, with a mortality somewhat better than that given.

Solution for Removing Silver Nitrate Spots.

℞ Bichloride of mercury..... 5.0 grammes.
Muriate of ammonium..... 5.0 grammes.
Distilled water..... 40.0 grammes.

Apply the mixture to the spots with a cloth, then rub.

PERISCOPE.

"Sometimes" Evidence Inadmissible. The appellate division of the Supreme Court of New York reversed a judgment for the plaintiff, and ordered a new trial, in the personal injury case of Blate v. Third Avenue Railroad Company, on account of a physician having been permitted to testify as to what "sometimes" happens as the consequence of a certain condition of things. It was not even an opinion of the physician as to the future condition of the plaintiff, or what would likely, or even possibly, happen to him as the result of the injury, that was elicited. But he was called to testify as to what sometimes results from such a condition as the plaintiff was found to be in, and that testimony was allowed to go to the jury under a complaint which alleged the permanency of the injury, and where the jury were instructed to allow damages for the injury that would follow from the condition in the future. This, the court holds, was error by which it was reasonably certain the jury were influenced to the disadvantage of the defendant, their verdict against the latter being quite large.—*Jour. A. M. A.*

A child was recently born in Fishkill weighing **eighteen pounds at its birth.** The parents are of moderate size, their other children weighing only six or seven pounds. In our own practice, says a writer in the *Medical Times*, many years ago a child was born with but little trouble weighing sixteen pounds and a half. Fearing some after trouble, he made an evening call and found the mother seated at the dining table eating a pork chop. One of the smallest children at its birth, of whom there is any account, was born in New Orleans three years ago, and weighed nine ounces. It is now living, a healthy child, with an appetite much larger than himself. He was the eighteenth child of the couple. Their first child, born in New York, weighed one pound. He is now twenty-five years old, and weighs only forty-six pounds. He is connected with a circus, and is the smallest athlete in the world.

A Town Without a Doctor.—The wonderful discovery has been made that only a short distance from New York City exists a town which has no resident physician. This town is North Bergen in New Jersey. The township authorities had been notified by the State Board of Health to appoint a town physician, and when they set about doing so they found there was no medical man, except a veterinary surgeon, living in the place. The salary attached to this important office is $50 per annum.—*Med. Rec.*

It is said by the Roman correspondent of the *Lancet* that there is a **foundling asylum** in Naples in which in two years, of the 850 patients admitted, only three survived. Three or four infants were often nursed by one wet nurse. In the foundling hospital in Venetia, the area of which is 24,000 square kilometers, and the population nearly 3,000,000, there are received annually 140,000 infants, the majority of which are illegitimate. The mortality is about 52 per cent. The cost of supporting the several hospitals is about $3,000,000 annually.

Schischa (*Wien. med. Woch.*) gives the results of treatment of 26 cases of **bubo with injection of benzoate of mercury.** The method originally used by Welander consisted in multiple injection of the bubo with ½ c.m. of a one per cent. solution. This was used both for inflamed and for fluctuating buboes. Schischa waits till there is distinct fluctuation, then expresses the pus through two small punctures, and injects the benzoate of mercury (one per cent.). Of his 26 cases, 21 were buboes secondary to soft sores, 2 secondary to hard chancres, and 3 were without sores on the genitals. The average time of healing was 21.5 days. Two cases were virulent, and became phagedenic, and took respectively 42 and 82 days to heal. In such cases the author does not consider the method of much use. The advantages claimed for this method of treatment are (1) the avoidance of an open wound; (2) the avoidance of an anesthetic; (3) the avoidance of the tell-tale scar; (4) the comparative painlessness; (5) the more rapid healing. Only one of Schischa's cases required further incision, and this was a very large bubo.

Backer (*Monatsschrift f. Geburtsh. u. Gynak.*, March, 1897) relates the case of a woman in her third labor, who seemed to be doing badly, when it was found that the retardation of delivery was **rupture of the uterus.** This was surprising, as the symptoms were by no means acute. Five hours after rupture the uterus and appendages were removed. The patient died within eight hours after the operation. At the necropsy the cause of death was found to be hemorrhage. The vascular and edematous pelvic connective tissue had shrunken up, so that the ligature had slipped. It is clear, says Backer, that mass ligatures are insufficient for the hypertrophied and vascular structures around a parturient uterus. Every divided vessel must be secured. The conjugate diameter of the pelvis was 3 7-10 inches.—*Times and Register.*

Congenital Malaria.—Winslow (*Boston Med. and Sur. Jour.*) reports the case of a male child, ten weeks old, apparently healthy and weighing seven pounds at birth, that did not flourish on its mother's milk and suffered from colic and vomiting. The child slept little, cried a great deal, was constantly moving, and had cold hands and feet. It had become emaciated, pallid, and weak. Various forms of artificial food had been employed, but without permanent benefit. The muscles of the limbs and neck were rigid, the head was slightly retracted, and handling induced crying. While under observation the patient had a severe convulsion characterized by muscular rigidity, loss of consciousness, clonic spasms, and strabismus, followed by a period of muscular relaxation and stupor. It was now learned that similar attacks had taken place from birth, being always preceded by prolonged crying. The child became so ill that the prognosis was doubtful. The question of malaria was suggested by the family but, as the temperature had been normal and no periodicity of the symptoms had been observed, the matter was left in abeyance. The mother had had quotidian malaria of a severe type for two weeks preceding the birth of the patient, but treatment had been withheld on account of the existence of pregnancy. The symptoms disappeared at the end of labor. Improvement in the child's condition failing in spite of varied treatment, examination of the blood was made, disclosing the presence of inalarial plasmodia in abundance. The child was given one grain of quinin by enema twice daily, and the convulsions at once ceased, although the muscular rigidity, the sleeplessness, the colic, the constipation, and the restlessness persisted. After a month of treatment the removal of the child to a non-malarial place was advised. Improvement at once set in, and after a week the quinin was withdrawn and one-fifth minim doses of Fowler's solution were prescribed. The plasmodia disappeared from the blood, the child gained in weight, and in a short time was quite restored to health.

Dowd (*Buffalo Med. Journ.*) recommends the following **treatment for chronic gonorrhea**: (1) A solution containing alum, sulphate of zinc, and carbolic acid—½ drachm of each to 6 ounces of distilled water—is applied by means of an Ultzman's syringe and soft catheter, first to the posterior urethra beyond the compressor urethræ muscle, afterwards to the anterior urethra in front of the compressor muscle. On the first day the strength of the above solution is ½ ounce to 7½ ounces of distilled water; on the second day, 6 drachms to 7½ ounces; on the third day, 12 drachms to 7½ ounces; on the fourth day, 12 drachms to 4½ ounces. After this, according to Dowd, the discharge usually ceases, and nothing remains but a few shreds and turbid urine. He then uses weak solutions of silver nitrate applied in the same way, starting with 1 in 12,000, gradually increased in strength to 1 in 6,000 on the fourth day. This is followed by passage of a sterilized sound into the bladder and allowed to reman there five minutes, after which 1 in 5,000 silver nitrate solution is again applied. This maneuvre is repeated every four days till the shreds are free from gonococci and pus. In cases where a morning drop of pus persists after the above treatment, this is due to follicular involvement, which is treated by the application of 10 to 15 per cent. silver solution, the follicles involved being found by the endoscope. If several large shreds persist after repeated use of full-sized sounds, there are probably granular spots which must be treated in the same way with silver nitrate. Dowd does not recommend injections in the early stage of profuse discharge. He thinks that silver nitrate is the best application in chronic cases, and that it will cure 96 per cent. of cases. He draws attention to lubrication of catheters and sounds with glycerin in place of oil, the latter preventing the solution used from coming into contact with the mucous membrane.

The Formation of Lactic Acid in the Stomach.—Rosenheim and Richter (*Zeitschrift Klin. Med.*, 1895) dispute the claim made by Boas, that lactic acid fermentation of the stomach contents is a pathognomonic sign of cancer, or nearly such. They have re-examined the whole subject, making a careful bacteriologic investigation of the contents of the stomachs of twelve individuals, some perfectly well, others affected with cancerous diseases, some with cancer of the stomach and some with disease in other forms. In all these cases they have been able to isolate a certain number of organisms, which possess, to a greater or less degree, the power of forming lactic acid with sugar. The theory of the specific character of lactic acid fermentation of cancer is thus demolished.

Investigators have also determined that the existence of the so-called specific cancerous germs cannot be sustained, as the same germs are found in the various forms of disordered digestion, and even in some cases in which free hydrochloric acid is present.—*Med. Times.*

According to the *Gazette Medicale de Nantes* **a most remarkable decision** has lately been given by a French court. A certain Dr. Méloche appears to have been condemned for neglect in a case where recent abortion was alleged to have been induced, because he had "neglected to make a chemical analysis of the blood, which gives one of the most positive signs of confinement." The solons who sat in judgment reproached him further because he did not make use of his stethoscope in determining whether the patient had lately miscarried.—*N. W. Lancet.*

Prof. E. v. Cyon has resumed his important **studies of the depressor nerve** (horses, dogs and rabbits) and now announces: 1. That stimulation of the third root, which anastomoses with the superior cervical ganglion, diminishes the blood pressure very much by reflex action, usually accompanied by an acceleration of the cardiac impulses. He has never observed the opposite effect with this isolated stimulation, even when both vagi were intact. The pupils are frequently noticeably contracted, and continue thus for a while after the irritation. 2. The root of the depressor nerve arising in the superior laryngeal nerve, serves principally to connect the heart with the thyroid, and enables it to directly control the action of the gland. The nerve fibers passing from the inferior laryngeal to the heart probably answer the same physiologic purpose. 3. Baumann's thyroidin introduced directly into the circulation affects the nerves of the heart and the vessels, especially the depressor nerve, to a marked extent. Stimulation of the depressor after the introduction of thyroidin causes a violent diminution of the blood pressure in many cases from which the animal is unable to rally and dies from lack of blood in the heart. He concludes his communication to the *Cbl. f. Phys.* of July 10 by stating that the anatomic and physiologic relations between the nerves of the heart and the thyroid, through the mediation of the depressor nerve, clearly explains the etiology of Basedow's disease and also of the strumous affections originating in over-exertion of the heart or violent emotions.—*Jour. A. M. A.*

The following are given as **points diagnostic in diseases of children** by J. Lewis Smith (*Med. Council*):

Lividity of the skin, induced by exertion or excitement while the respiration is normal, indicates malformation or disease of the heart or vessels.

Transient circumscribed congestion of the face, ears or forehead is a most reliable sign of brain disease.

Absence of tears in infants over four months of age, during the act of crying, indicates a severe and probably fatal form of disease.

A permanent downward direction of the axis of the eyes, with smallness of the face and great expansion of the cranium, is a sign of congenital hydrocephalus.

Young children do not shake when they have chills, but have a pallor or lividity of the skin, lips and nails.

Bulbous enlargements of the fingers and incurvation of the nails are signs of cyanosis and therefore of malformation at the center of the circulatory apparatus, or of tuberculosis, or of chronic pulmonary diseases attended by malnutrition.

Enlargement of the spongy portion of the bones causing prominence, softness and bending of the bones; an open condition of the fontanelles; a large, square-shaped head, and delayed dentition indicate rachitis.

A thick, meibomian secretion of puriform appearance, collecting between the eyelids, an unfavorable prognostic sign, indicates a state of great depression. It is observed more frequently in cerebral and intestinal diseases shortly before death.

There is often a hyperesthetic condition of the skin with certain acute, febrile and inflammatory affections. This hyperesthesia is more often found on the anterior surface of the trunk. This condition is often misleading to the physician, leading him to think that the hyperesthetic pain is of an inflammatory nature. The pain of hyperesthesia can be readily diagnosed from that of inflammation by the fact that it is so extensive, is less severe on firm pressure than on light, and is especially observed on the inner surface of the thigh.

G. v. Voss (*Deut. Arch. f. klin. Med.*) concludes that the pathologic change found in the columns of Burdach and Goll in some **cases of pernicious anemia** is not to be regarded as a chance coincidence, but as a pathologic change caused by the disease in question, though since first described by Lichtheim and Minnich, a similar change has been found in other affections. In order to experimentally investigate the relation of the spinal change to pernicious anemia, Voss produced an artificial anemia in animals by means of pyrodin and other substances. He was able to keep the anemic animals alive a considerable time, up to twenty-four weeks, but could not obtain any characteristic change in the spinal cord. He is therefore inclined to think that in cases of pernicious anemia the degenerative changes in the cord sometimes observed are not the result of mere anemia but are more probably the result of hitherto undiscovered chemical agents. A thorough examination of the metabolism in pernicious anemia might perhaps throw further light on the question.—*Brit. Med. Jour.*

Resection of Lung would appear at first glance to be a rational method of procedure in tuberculosis of the pulmonary structure. Surgeons who are accustomed to practice resections of the articular extremities in tuberculous osteoarthritis and extirpation of the synovia in tuberculous synovitis, and who have witnessed the gratifying results following these operations, are at once impressed with a desire to institute radical operative methods in a disease which counts its victims by thousands yearly. The pulmonary structure, however, differs from all other structures in the body in its susceptibility to infection by means of the bacillus tuberculosis, and its anatomic peculiarities are such as to favor extension to infection and reinfection of parts whose vital resistance has been lowered by disturbances of nutrition from any cause.—FOWLER, *Annals of Surgery.*

Toxin in the Urine of Cancer Subjects.—Castilli (*Archivos de la Policlinica*) has found in the urine of patients with cancer and cachexia a toxic element of extreme virulence. Injected into animals it produces the clinical picture of the characteristics of the blood in cancer, determining a hematolytic or inhibitory effect on the hematopoiesis.—*Jour. A. M. A.*

Chvostek states that there was no ground for supposing **chronic rheumatism to be a disease of bacterial origin.** The great variability in the course of the disease is strongly opposed to any such view; the only two characteristic features of the disease are the joint swellings and the transitory duration of these. The most satisfactory explanation is to regard the symptoms as due to toxins, which are produced in the body but are not produced by micro-organisms. Bacterial invasion gives rise to a very different kind of joint inflammation, characterized chiefly by its long duration, and the large amount of swelling which accompanies it.—*Brit. Med. Jour.*

According to the record in the case of Loudoun v. Eighth Ave. Ry. Co., the appellate division of the Supreme Court of New York says, it would appear that there had been a **disclosure by one of the medical witnesses** for the defense of facts which he had obtained as the physician of the plaintiff. This, it continues, was done regularly and systematically, was a flagrant violation of the duty which he owed to his patient, and a contempt of the law which prohibits such disclosures. Under these circumstances, the court declares, the counsel was justified in calling the attention of the jury to the fact of this violation of law, of this failure of appreciation of the duties of a professional man to his patient, and of the flagrant abuse of the position which he occupied. It adds that it cannot be said that any too severe language was used in criticising the conduct of the physician who would thus betray his patient. This physician had been guilty of the grossest violation of his duty, and was open to the severest criticism and condemnation.—*Jour. A. M. A.*

A Russian marine surgeon says that applications of compresses dipped in a chemically pure solution of bicarbonate of soda, of the strength of two per cent., arrests the production of pus and stops inflammation far more rapidly than any known antiseptics.—*Atlantic Med. Weekly.*

For Laryngismus Stridulous.

℞ Potas. citrat	7	(℥ii.)
Syrupi. ipecac	15	(ʒss.)
Tinct. opii	1	(gr. xv.)
Syr. simpl	15	(ʒss.)
Aquae .....ad.	120	(℥iv.)

Mix. Sig.: For older children, give a teaspoonful every two hours.—*Exchange.*

NEWS AND MISCELLANY.

Papain is the active principle isolated from the dried milk juice of the Carica Papaya (Papaw Juice). It occurs as an amorphous, white or yellowish white powder, soluble in water. One part will dissolve one hundred to two hundred parts of blood fibrin. Papain possesses the peptonizing properties of Papaw Juice in a high degree of concentration, and has the power to dissolve more meat peptone or coagulated albumen than pepsin, and in a much shorter time. Unlike pepsin, it is equally effective in acid, neutral or alkaline solutions. It has therefore the digestive action of both pepsin and pancreatin. It also prevents fermentation of food, and increases the digestive juices. By virtue of these properties it has considerable success in the treatment of many gastric and intestinal troubles, proving valuable in dysentery and chronic diarrhea of infants.

One of the first uses of papain was to employ its solvent powers in the solution of false membranes of diphtheria, used in a five per cent. solution, brushed or sprayed on affected parts. Experience characterizes it as a rapid solvent for diphtheria membrane. It has also been given internally in these cases in connection with cinchona.

Papain has been effective as a remedy for tænia. Bartholow thinks that it is most probable that papain has a toxic influence upon the worm, causing it to relax its hold on the mucous membrane. It should be given in ten-grain doses, three times a day, followed by castor oil.

Locally it has been satisfactory in cases of lupus vulgaris, and of crustaceous eczema. In these cases the morbid tissue is broken down in solution, thus removed, and a clean surface secured. It has also been used in cancerous tissues.

Papain is *par excellence* in diseases of the digestive tract. Its action throughout the entire digestive system and its action upon normal mucous membranes, warrant its application in diseases of the stomach and bowels. The many conditions such as dyspepsia, gastric and intestinal catarrh, etc., etc., in which we can not do better than employ it. Now that we are in the midst of the season of heat, most trying to infancy, its use, if need be, combined with other appropriate remedies, may be given in doses from 1 to 5 grains; children in proportion, according to age.—*Toledo Med. and Surg. Re.*

Expressed in time units, the distance between **Cape May, N. J, and Philadelphia, is 100 Minutes**—measured by the "Century Flyer" over the route of the South Jersey Railroad.

This, and like marked reductions in time to other points, in connection with the superior modern equipment, splendid service, and capable management maintained by the railroad, easily accounts for recent great increase of travel to the health resorts along the southern coast of New Jersey.